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LOSING A MILLION MINDS: CONFRONTING THE TRAGEDY OF ALZHEIMER'S DISEASE AND OTHER DEMENTIAS

Contractor Documents

Part 2:
Economics, Social Science and Health Services Research

March 1987

The Economics of Dementia, George J. Neilson and Gerald L. Robinson, Battelle Columbus Laboratories, Columbus, Ohio 43201

Financing Care for Patients with Alzheimer's Disease and Related Disorders, Karen Davis and Patricia Neuman, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Maryland 21205

Dementia Among Nursing Home Patients: Defining the Condition, Characteristics of the Demented, and Dementia on the RUG-II Classification System, William J. Foley, Industrial and Management Engineering Department, Rensselaer Polytechnic Institute, Troy, New York 12180

Analysis of Data Bases for Health Services Research on Dementia, Korbin Liu, The Urban Institute, Washington, D.C. 20037

Impact of Dementia Within Minority Groups, Shirley A. Lockery, University Center on Aging, San Diego State University, San Diego, California 92182

Caregivers of Patients with Dementia, Yankelovich, Skelly and White/Clancy, Shulman, Inc., New York, New York 10022

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FINAL REPORT

on

THE ECONOMICS OF DEMENTIA

to

THE OFFICE OF TECHNOLOGY ASSESSMENT
CONGRESS OF THE UNITED STATES

December, 1984

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III

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EXECUTIVE SUMMARY

Describing the economics of a disease or condition requires a priori knowledge of the number of patients afflicted, the characteristic use of health care resources by those patients and the unit prices of the resources consumed. The economics of dementia are not well understood at this time. This is largely due to the co-existence of several uncertainties in the present description of the cohort of patients suffering from the condition, and their patterns of health care resource use.

Uncertainty in the estimate of the size and nature of the cohort of patients who suffer from dementia results from lack of precision in the present description of:

- The prevalence of the condition called dementia
- The distribution of that prevalence among the various causes
- The staging and time course of the major cause (Alzheimer's type dementia), and
- The dynamics of the patient cohort (the incidence of the condition and the occurrence of deaths in the cohort).

In addition, there has been no recent comprehensive study addressing the empirical measurement of how health care resources are actually used or consumed by demented patients. Thus, patterns of care are not accurately defined.

Since some, although probably less than a third, of the demented patients are treatable, it is clinically appropriate to proceed with the diagnostic process for all demented patients. On the basis of the literature and current prices, we estimate that the expenditures for diagnostic services could potentially be at least $84 million in 1985. Diagnosis is unquestionably essential to the patient's health and, hence, these expenses must be expected to be borne by the entities that finance the maintenance or improvement in the individual's health (i.e., 3rd party insurers) in accordance with prevailing social policy.

From the perspective of therapy, some proportion of the demented patients, perhaps 20 percent, will benefit from clinical interventions specific to the cure, arrest or treatment of their underlying disease. Again, these expenses will be borne by the present social mechanisms of health care finance. But the bulk of the social cost of caring for demented patients will occur as a result of supporting the needs of daily living for those patients who cannot care for themselves, and for whom clinical medicine has nothing to offer at this time.

We estimate that the cost of nursing home care for demented patients may fall in the range of $14 billion to $22 billion in 1985, and that the total spent on in-home care provided by agency services may be in the range of $10 billion to $26 billion. Because of the numerous untested assumptions implicit in these estimates, the identification of quantitative confidence limits is not possible, and no particular significance can be ascribed to "median" values.

Sources of payment for the costs of dementia and its causes do not now routinely link claim information to the diseases in this group. Data base changes already underway throughout the industry, if augmented by appropriate changes in policy and accounting procedure, could lead to such routine reporting in the 5 to 10 year time frame. But, the cost to the demented patients and their families must be more clearly described, and this will require implementation of carefully controlled studies with greater specificity to the use of health care resources in this particular disease group.

The indirect costs of dementia, in terms of the family's emotional suffering, catastropic depletion of resources and concomitant loss of income due to participation in care giving activities, are not well characterized at this time. We know that these costs are awesome in many individual cases, but are unable to accurately define them or scale them to the level of the national population.

From the perspective of improving the economic model of this disease group, it is essential to:

- Determine those areas in the overall model of dementia economics that are most critical to accurately estimating or predicting the social cost

- Identify the accuracy with which the values of attendant variables must be measured if the economic model is to be useful, and
- Implement a program of studies, and accounting procedure change throughout the industry, that may be expected to culminate in an economic model of the desired accuracy.

THE ECONOMICS OF DEMENTIA

Introduction

Dementia is defined as the loss of intellectual function. The loss may be minimal; for example, a modest impairment in memory. Or, it may be so severe as to render a person incapable of either comprehending the immediate environment or responding to it in any way. The condition called "dementia" may be caused by a variety of clinically recognized abnormalities. Some of these disease states are treatable, others are not. The most common form of the condition is progressive and insidious, "dementia of the Alzheimer type". There are no diagnostic tools of clinical medicine that can identify Alzheimer's disease with specificity at this time. The diagnosis "dementia of the Alzheimer type" is reached by ruling out all other known causes of dementia, and can be confirmed only at autopsy or by biopsy. There is no effective treatment for Alzheimer's dementia at this time.

Economics is the science of the production, distribution and consumption of wealth in a society. Identifying the impact of a disease or condition on an economy is an exercise in determining the "costs" that result throughout the society from the occurrence of the condition in the population. These costs may be "direct", for example, the prices of health care products or services that are consumed during episodes of patient care.

Or, they may be "indirect", for example, lost social productivity or emotional stress on the part of the patient or the patient's family. In any event, the costs are incurred one case at a time. The total social impact is the sum of the impacts associated with the individual patients.

On The Ideal Model of Dementia Economics

The specific characteristics of an "ideal" conceptualization, or model, of dementia economics depend, to a certain extent, on the uses to which the model will be put. It is one thing, for example, to accurately describe the present cost of the condition, and another thing to accurately predict the future cost. In general, the accuracy of the model depends on how well we understand the processes underlying the occurrence, diagnosis and treatment of the condition; how accurately we are able to measure costs; and the accuracy with which we can forecast demographic and economic trends.

The purpose of this analysis is to identify the accuracy with which the economics of dementia can be described and predicted at this time. This assessment of the present knowledge base is reported in five segments: the occurrence of dementia; patterns of care for the demented patient; the cost of health care services; the cost of dementia in 1985; and sources of payment for care.

The Occurrence of Dementia

In the parlance of epidemiology, the occurrence of a disease or condition is described in terms of its "prevalence", "incidence" and "death rate". "Prevalence" is the number of people with the disease (frequently expressed as a proportion of the base population at a specified point in time). "Incidence" is the number of new cases of the condition that arise in the population during a specified period of time (usually a year). The "death rate" is, of course, the number of people who die from the disease during a specified period of time. Since the occurrence of illness generally increases with advancing age, "age specific" disease occurrence characteristics offer improved precision in estimating the size of patient cohorts in the population.

Seventeen reports of the measured occurrence of "dementia" in various populations of the western world during the 1940-1982 time frame are summarized in Table 1.[15,24,26] Note that values of the prevalence of "severe" dementia in the population over 65 years of age, as reported in 12 studies, range from 1.1 percent to 6.2 percent (average 3.51 percent). Causes of this variation doubtless include differences in the clinical definition of "severe" dementia as well as geographic and social variation in the dynamics of disease occurrence. It is impossible to determine accurately, from the current literature, the average value of the prevalence of severe dementia in the

TABLE 1. ESTIMATES OF DEMENTIA PREVALENCE

Investigators/ Publication Date	Country	Year of Survey	Population Age	Occurrence of Organic Brain Symdrome (Cases/100) "Severe"	"Mild"
Sheldon (1948)			> 65	3.9	11.7
Bremer (1951)			> 60	2.5	
Essen-Moller et al (1956)	Sweden	1947	> 60	5.0	10.8
Prepirose (1962)	Scotland	1959-60	> 65	4.5	
Nielsen (1963)	Denmark	1961	> 65	3.1	15.4
Jensen (1963)			> 65	1.1	1.1
Kay et al. (1964)	England	1960	> 65	5.6	5.7
Parsons (1965)			> 65	4.4	
Akesson (1969)	Sweden	1964	> 65	1.3	
Kay et al. (1970)	England	1960-1964	> 65	6.2	2.6
Pfeiffer (1975)			> 65	4.0	
Bollerup (1975)	Denmark	1967	70	1.6	5.0
Bore et al. (1965)	Scotland			3.8	4.3
Wang (1977)			> 65	2.3	
Adolfsson et al. (1981)			> 65	3.7	
Molsa et al. (1982)	Finland	1976	> 65	2.0	
				Occurrence of Cognitive Impairment	
				"Severe"	"Mild"
Myers, et al. (1984)	USA	1980-1982	> 65	4.0-6.2 (Male) 3.6-4.8 (Female)	11.5-18.4(Male) 11.6-16.6 (Female)

United States' population over 65 years of age. If it falls within one standard deviation of the average noted above, it could vary between 1.9 percent and 5.12 percent, ± 46 percent of the average value. The age-specific prevalence of dementia appears to exhibit stability over the course of time at least within the present bounds of observation error. For various technical reasons, it is likely that age-specific incidence and death rate values are less precisely known.

Prevalence rates may be applied to population projections to yield estimates of the size of future patient cohorts. Certain elements of population dynamics in the USA still elude demographers even though they are better understood than disease occurrence. Unfortunately, the size of the population over 65 years of age is one of these elements. Ten years ago, in 1974, projections of the U.S. population 65 years of age and older were as indicated in Table 2. Results of the 1980 Census and recent (1983) projections for 1990 and 2000 are also indicated in Table 2. The 1974 projection for the 1980 U.S. population, at and over age 65, was found to be 4.2 percent less than actually measured at the 1980 Census. This trend has been observed of recent decades and is thought to be the result of our ever increasing ability to extend the duration of disease at all ages by postponing death. As we approach the middle of the 1980s, it is appropriate to consider present projections of the elderly population in 1990 as conservative, perhaps by as much as 4 percent. Longer-term forecasts may prove to be even more conservative.

TABLE 2. ESTIMATES OF THE U.S. POPULATION 65 YEARS OF AGE AND OLDER (People x 10^3)

Estimate for the Year	Year That Estimate Was Published		Mean Estimate Published in 1974	Percent Change in Estimate by 1983
	1974	1983		
1980	24,523-24,502	25,544	24,512.5 ± .04%	+4.21%
1990	28,933-28,795	31,799	28,864 ± .24%	+10.17%
2000	30,600-30,223	35,036	30,411.5 ± .62%	+15.21%

Patterns of Care for the Demented Patient

Determinants of the health care needs of a demented patient are the underlying cause of the dementia and the progression or stage of that disease. Other determinants of the health services actually used by demented patients include the availability of, and access to, health care resources, and the patient's socioeconomic status and social supports.

The causes of dementia include those listed in Table 3.[18,21,39] Some of these are treatable. Since the physician's goal is to seek the presence of treatable disease, a characteristic pattern of diagnostic resource use will occur among those patients who have access to relevant diagnostic health services. Thus, we must explore the extent to which this pattern can be quantified.

The relative frequency of occurrence of various causes of dementia, as recently observed by two investigators, are indicated in Table 4.[11,26] These two studies are reported herein because they illustrate an important point: The relative occurrence of different causes of dementia is dependent on sociodemographic characteristics of the population. "Study 1", reported in Table 4, observed a U.S. population that was: a) male and b) economically disadvantaged. These characteristics traditionally suggest a preponderence of substance abuse (i.e., alcohol and other drugs). Both of these studies involved relatively few patients. It is generally conceded in the literature that "about half" of the organic brain syndrome cases

TABLE 3. SOME CAUSES OF DEMENTIA

Alzheimer type dementia

- Early onset
- Late onset

Vascular disease (multiple cerebral infarcts)
Parkinson's Disease
Subdural hematoma (trauma)
Drug toxicity

- Alcohol
  - Intoxication
  - Wernicke-Korsakoff
- Other

Infection

- Tuberculosis
- Cryptococcosis
- Syphilis
- Viral (e.g., Creutzfeldt-Jakob)

Meningoencephalitis
Hydrocephalus
Hepatic Disease
Brain Tumor
Anoxia and Hypoxia
Huntington's Chorea
Thyroid Disease
Pernicious Anemia
Pick's Disease
Depression

TABLE 4. THE RELATIVE FREQUENCY OF OCCURRENCE OF SOME CAUSES OF DEMENTIA

Cause	Relative Occurrence of Different Causes of Organic Brain Syndrome in Two Populations (%)	
	Study No. 1	Study No. 2
Dementia of the Alzheimer Type	30	52
Multi-infarct Dementia	16	36
Post Traumatic	2.7	2.6
Brain Tumor	5.4	0.2
Occult Hydrocephalus	1.4	0.7
Toxic and Related	19	2.1
Other	25.5	6.4

in a geography-specific population of the "western world" will be due to dementia of the Alzheimer type, and that "about 10 to 20 percent" will be due to multi-infarct (MI) dementia. The combination of MI and Alzheimer type dementia is also frequently observed. Since there is no diagnostic test with specificity for the detection of Alzheimer's dementia, this means that about 50 percent of the cases will have had "all other causes" ruled out. We find no hints in the current literature regarding a more precise the meaning of "about" in this case. Is the relative occurrence of Alzheimers 50 percent ± 10 percent? This is consistent with the premise that if the actual occurrence was over 55 percent (or under 45 percent) the value would probably be stated as "about 60 percent" (or "about 40 percent"). However logical this error bound appears, it has no *a priori* basis in observation.

The list of diagnostic resources that may be brought to bear on a dementia victim appears in Table 5. DHHS guidelines recommend the full gamut of testing (except for PET, which is relatively new on the scene) when Alzheimer's disease is suspected. A neurologist is usually the "captain" of the diagnostic team that may include a psychiatrist of psychologist and, of course, the primary-care physician.

Therapeutic resources associated with the care of a demented patient depend, of course, on the nature of the underlying disease. If it can be cured, arrested or treated, appropriate action should be taken. Solid tumors, for example, may be resected and (or) treated with cytotoxic chemotherapy and

TABLE 5. DIAGNOSTIC RESOURCES RELEVANT TO THE DIFFERENTIAL DIAGNOSIS OF DEMENTIA

Physician Services

- Neurologist
- Psychiatrist/Psychologist

Laboratory

- Blood count (complete)
- Liver function
- Renal function
- Thyroid function
- Blood levels of
    - CO_2
    - electrolytes
    - BUN
    - vitamin B12
    - folate
    - sugar
- Blood sedementation rate
- Urinalysis
- Urine culture
- Syphilis serology
- CSF microbiology
- Stool guaiac

Diagnostic Radiology

- Chest series
- Brain CT scan
- Brain PET scan

Other Procedures

- Electrocardiogram
- Electroencephalogram
- Lumbar Puncture
- Autopsy

(or) radiation. We find no comprehensive study in the recent literature that characterizes resource use for each category of treatable dementia. More than "half" of the cases will not be treatable (including dementia of the Alzheimer type) and resource use will focus on maintenance of the victim's needs of daily living.

Since Alzheimer's disease is progressive and insidious, and since there is no know cure, changes in the economics of care for the individual patient hinge on the patient's changing requirement for support during the course of the disease progression. Again, there is no quantitative model. In its early onset form, Alzheimer's disease is observed to be most rapidly progressive, with an anticipated life expectancy of perhaps 10 years. During the latter part of this span, no self-care is possible. In contrast, late onset Alzheimer's disease exhibits a typical duration of up to 20 years. Since therapy is supportive, it may often be delivered in the home. The usual indication for institutionalization of the patisnt is for the benefit of the family. Although the Alzheimer patient requires ever increasing support for daily living, highly skilled nursing care is seldom required. Thus, categories of home health care givers include "patient aides" and "LPNs" as well as "RNs". Inpatient services may be temporary as, for example, a day care center or "respite" care, or they may be full-time as in the case of a nursing home (or hospice during the terminal phase of illness).

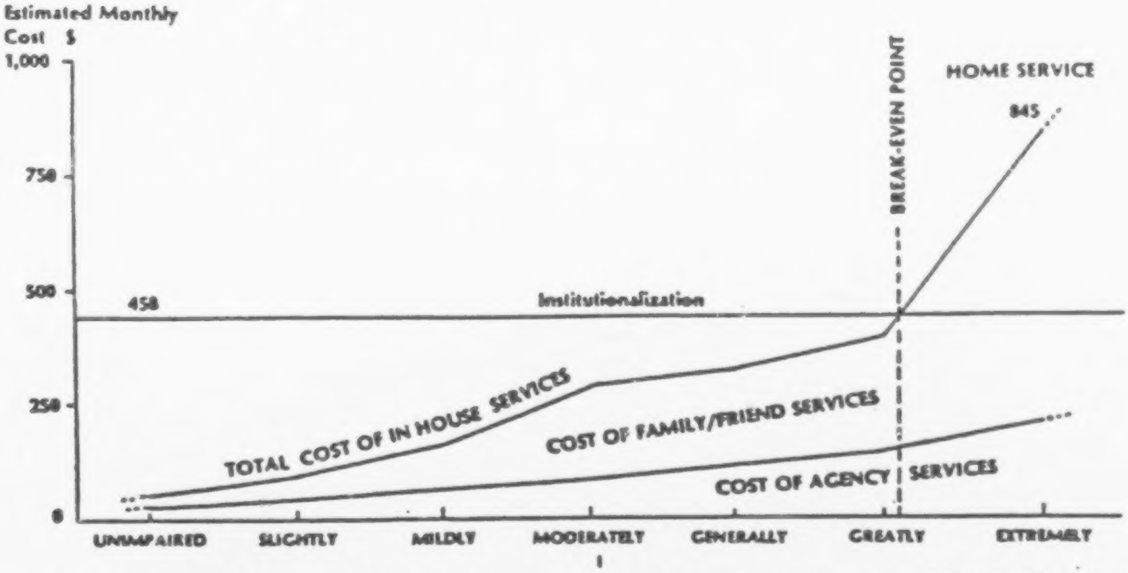
We find no published studies that clearly identify patterns of health care resource use among large numbers of demented patients. A series of studies conducted by the General Accounting Office and others during the 1975-1980 time frame, provide considerable insight into the health services needs and associated economics of caring for the impaired elderly.[14,31,34,35] These studies did not specifically address the care of patients with cognitive impairment of specified type. Any comprehensive model of the therapeutic services used by demented patients should identify the use of:

- "Family-based" care givers
- Home health services
- Day care facilities
- "Respite" care (providing family care givers with a "holiday")
- Nursing home care
  - skilled
  - other
- Short-term acute hospital care
- Hospice (terminal),care.

There is no single pattern of resource use that is "correct". Depending on the resources available to the family, there may be many ways to delivery acceptable daily living support to the patient by using various mixes of the services listed above. One could measure the present use of these resources in a population of demented patients and, in fact, such empirical studies should be undertaken. Empirical studies of resource use during the care of demented patients, together with information about the current prices of unit resources, could be used to update the GAO model (Figure 1).[14] Although not originally developed with specificity to causes of cognitive impairment, and obviously in need of adjustment with respect to recent health care economic trends, the model vividly displays an important concept of dementia economics; the identification of the "break even" point between home care and institutionalization.

Figure 1

Comparison of Estimated Monthly Cost of Home Services and Institutionalization at Each Impairment Level per Individual



SOURCE: Comptroller General of the United States. Report to Congress on Home Health—The Need for a National Policy to Better Provide for the Elderly. U.S. General Accounting Office, HRD-78-19. Washington, D.C.: U.S. General Accounting Office, December 1977.

Cost of Care for the Demented Patient

Two separate categories of the cost of care for the demented patient must be considered: "direct" and "indirect" costs. Direct costs are the charges paid (either by the family or a third party) for services rendered or products purchased. Indirect costs include the "value" of family care giver time, the loss of productivity on the part of both the patient and family care givers, and intangible burdens such as family emotional distress.

The Direct Cost of Care for the Demented Patient

Recent values of prices for unit diagnostic services used by dementia victims are indicated in Table 6. Recently reported values of unit service prices for therapeutic and maintenance health services are indicated in Table 7. Taken together, Tables 6 and 7 identify a current cost of most health services units that are likely to be consumed by the demented patient.

The Indirect Cost of Caring for the Demented Patient

Precisely defining each element of "indirect cost" is important in any model of patient care. With respect to care of the demented patient, this is especially critical. Remember that:

TABLE 6. UNIT PRICES (PREVAILING CHARGES) OF DIAGNOSTIC SERVICES USED BY DEMENTED PATIENTS (1983-1984)

Physician Services	
Medical specialty (Neurologist, Internist)	
Initial comprehensive visit	\$69.39
Follow-up extended visit	34.07
Psychiatrist (per hour)	64.18
Laboratory	
Complete blood count	11.26
Blood urea nitrogen	8.44
Blood sugar	7.88
Blood sedementation rate	6.44
Urinalysis	5.96
(Microbiology) culture other than blood	16.48
Screen for ocult blood in stool	6.51
Specimen collection	4.10
19 chemistry panel	25.92
Electrolytes [a]	9.00
Blood CO_2 [a]	6.25
Vitamin B12 & Folate [a]	47.00
Thyroid Function [a]	25.00
Syphilis Serology [a]	7.00
Diagnostic Radiology	
Chest series (2 films)	35.16
Brain CT Scan	287.11
Other Procedures	
Electrocardiogram	32.70
Electrocardiogram interpret and report	15.12
Electroencephalogram	83.51
Autopsy - whole body [b]	1,800.00
Autopsy - brain [c]	300.00

Sources: 1984 Medical Directory of Prevailing (75th Percentils) Changes Except as Noted.

[a] Current prices of a large commercial laboratory.

[b] Personal communication with Dr. R. Yesner, Westhaven V.A.M.C.

[c] Estimate based on opinion: no quantative costing study has been identified.

TABLE 7. UNIT PRICE OF THERAPEUTIC OR MAINTENANCE HEALTH SERVICES USED BY DEMENTIA PATIENTS

Type of Service		
Home Health Services: (In-home time usually provided in minimum blocks of 2 to 4 hours)		
Skill Level[a]		
• "RN"	$16-$20 (per hour)	$64-$80 (per half day)
• "LPN"	$15-$16 (per hour)	$60-$64 (per half day)
• Patient Aide	$7-$7.50 (per hour)	$28-$30 (per half day)
Day Care (1983-1984)[b]	$20 ± 20%[d] (per day)	
Nursing Home		
• Base	$1,500 ± 35%[d] (per month)	
• Medicaid Rate		
- Skilled	$1,308 (per month)	
- Intermediate Care	$1,095 (per month)	
Acute episodes of in-patient care (analyses of 4,460 episodes of acute care delivered to demented patients in 1980, adjusted by the Consumer Price Index)[c]	$3,500 (per episode)	

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[a] Local pricing data from a large supplier of "in-home" services.

[b] Unpublished study conducted by Alzheimer's Disease and Related Disorders Association (ADRDA), Columbus, Ohio Chapter.

[c] Personal communication with USDHHS, HCFA personnel.

[d] Estimates of possible variation in mean value derived from limited information about variations among the observations.

- Most (probably more than 90 percent) of the demented patients are over retirement age.
- Loss of cognitive function during much of the "second half" of the Alzheimer's disease course (about half of the Alzheimer type patients) is sufficiently complete in most cases to prevent the patient from differentiating between family and non-family care givers on the basis of recognition, although a stable environment, including continuity of care giver(s) is essential.
- There is no hope for cure or arrest of Alzheimer's dementia at this time or in the near future. This is also essentially true for multi-infarct and some other types of dementia. Thus, for at least 70 to 80 percent of all dementia victims, cure is not possible at this time.
- The family may wish to maintain home care beyond the point at which it becomes "inefficient" in some (measurable) social sense. Social intervention in the family decision may not be appropriate.

There is usually more than one way to deliver care of good technical quality to the demented patient. It is important for the family to understand the direct costs of the alternatives, and to have able assistance in financial planning as they develop their "strategic" plan for the 10 to 20 year time frame over which care is likely to be required. When the family is not involved in care giving, the costs are largely "direct" and borne by the family's resources and (or) third party payors. When the family is involved there may still be direct costs (as a result of using in-home agency services, for example), but there are also both "tangible" and "intangible" indirect costs. One measure of tangible indirect costs is the present market value of care-giving services delivered by family and friends.[14] Another is the value of income lost to the care givers who are forced to stop or curtail their own work in order to maintain the patient's care. In addition to these kinds of losses, many family care givers responding to a recent survey conducted by the Columbus, Ohio Chapter of the ADRDA identified significant emotional consequences as a result of their lost recreational time, social interactions, privacy, and the like. Again, there is evidence that empirical measurements of these indirect costs may be forthcoming from studies that are now planned or recently initiated, but no recent published measurements of these costs are available today.

The Estimated Cost of Dementia in 1985
Our Present Understanding

Obviously, our knowledge of the cost of dementia in the U.S. today is not very precise. Consider, now, the range within which this cost might fail.

Let us begin by estimating the size of the cohort of demented patients that is likely to occur in the United States in

1985. Let us assume that the average annual prevalence will fall in the range identified earlier (average 3.5 percent of the population at or over age 65 years, maximum 6.2 percent and minimum 1.1 percent). We assume that this age-specific prevalence is stable with time, and that it will account for about 90 percent of all dementia cases. We identify the population over 65 years of age by extrapolation from the U.S. Population Projections for 1980 and 1990,[28] considering that as a lower limit of the population's size, and setting the upper limit at that value plus 4 percent (consistent with recently observed errors in the five year forecasts of the elderly). This results in the forecast of 1985 dementia prevalence indicated in Table 8. Note that the distinction between high and low estimates does not describe quantitative confidence limits: we simply suggest that, in 1985, there will be between 360,000 and 1,960,000 severely demented patients in the United States. We note that a mid-range value is 1,130,000 patients, but attach no particular likelihood to that value over, say, 500,000 or 1,800,000. The "high" estimate thus computed is about 500 percent larger than the low estimate. Relative to the mid-range value, the limits are plus 81 percent and minus 69 percent. Obviously, this is not a very precise estimate and deserves to be further qualified by whatever means are available.

TABLE 8. ESTIMATED PREVALENCE OF SEVERE DEMENTIA CASES OF ORGANIC CAUSE IN THE USA IN 1985

	Low	Mid	High
1985 Forecast: U.S. Population ≥ 65 years of age (YOA)	28,671,500	29,244,930	29,818,360
Prevalence of Dementia ≥ 65 YOA (%)	1.1	3.5	6.2
1985 Forecast: Prevalence of Dementia in U.S. Population ≥ 65 YOA	315,387	1,023,573	1,848,738
+ 10% (dementia occurring < 65 YOA)	31,539	102,357	184,874
1985 Forecast: Prevalence of Dementia in U.S. Population	346,926	1,125,930	2,033,612

Observation of Mental Impairment in the Elderly

About 1980, the GAO consolidated and published the results of three separate studies of the elderly population.[31,34,35] Taken together, these studies span a wide range of social, geographic and economic environments. Observations of the elderly (over 65 years of age) were made in Cleveland, Ohio, during 1975, in the Gateway Health District of Northern Kentucky (Appalachia) during 1977, and in Lane County, Oregon during 1978. The Lane County, Oregon population was segmented into three groups: urban, small town and rural. The presence of mental impairment sufficient to "greatly interfere with (normal daily) activities" was identified. These results are indicated in Table 9.

This variation in the occurrence of mental impairment, 10 percent to 37 percent, is probably exaggerated by the observation in Appalachia which is one of the few U.S. areas with a high concentration of those who are socioeconomically disadvantaged. On the basis of these data, we might conclude that a national average value for the occurrence of mental impairment thus defined was in the range of 10 percent to 15 percent. In combination with the previously stated population estimates for 1985, these data suggest the 1985 case load indicated in Table 10. There is, of course, no quantitative basis for selecting these rural mental impairment occurrence rates of 15 percent and 20 percent: they are simply larger than the lowest

TABLE 9. THE OCCURRENCE OF MENTAL IMPAIRMENT IN THE (OVER AGE 65) ELDERLY (GREATLY INTERFERING WITH ACTIVITIES) [31]

Geographic Area	Occurrence of Mental Impairment (% of population over 65)
Urban	
Cleveland, Ohio	12
Urban Lane County, Oregon	10
Small Town	
3 small towns, Lane County, Oregon	10
Rural	
Rural Lane County, Oregon	14
Northeastern Kentucky	37

TABLE 10. 1985 ESTIMATES: THE OCCURRENCE OF MENTAL IMPAIRMENT GREATLY INTERFERING WITH (DAILY) ACTIVITIES

	High		Mid		Low
	Urban	Rural	Urban	Rural	
1985 population over 65 YOA	29,818,000		29,245,000		28,672,000
Proportion urban-rural	0.7375	0.2625	0.7375	0.2625	
Population urban-rural	21,991,000	7,827,000	21,568,000	7,677,000	
Mental impairment occurrence rate (%)	11	20	11	15	10
Case load (urban-rural)	2,419,000	1,565,000	2,372,000	1,152,000	
Total 1985 case load over age 65	3,984,000		3,524,000		2,867,000
+ 10 percent (under 65 years of age)	398,400		352,400		286,700
Total 1985 Case Load	4,382,400		3,876,400		3,153,700

finding and not as large as the measurement in Appalachia that is thought to be representative of a very small population segment. Thus, on the basis of this study, about 3,900,000 cases of such mental impairment may be present in the USA in 1985. Remember that these patients have impairment "sufficient to greatly interfere with activities", not "severe" in the clinical sense as was the case for the forecast presented in Table 8.

How might these cases be distributed with respect to underlying cause? Probably the best available analysis of the relative occurrence of different causes of dementia was developed by Wells in 1979 using data from six separate studies.[26] the relative proportion of cases resulting from that study and the case loads corresponding to a total prevalence of 3,900,000 cases are indicated in Table 11.

The Economics of Diagnosing the Causes of Dementia

In order to consider the cost of diagnosis, it is necessary to characterize the incidence of dementia. One recent study[15] quantified annual age-specific incidence rates per 100,000 population for 10 year age increments beginning at age 45. The prevalence rate over 65 years of age reported by this study was relatively low (2.0%). Using the age-specific incidence rates reported by this study and the "mid-range" population estimate for 1985 (previously discussed) dissected into age groups one may compute the number of new cases of

TABLE 11. THE PREVALENCE OF VARIOUS CAUSES OF SEVERE DEMENTIA (1985 ESTIMATE)

Diagnosis	Percent Total Cases	Estimated Number of Cases 1985
Dementia of Unknown Cause (presumptive diagnosis DAT)	47.7	1,860,300
Multi-Infarct Dementia	9.4	366,600
Huntington's Chorea	2.9	113,100
Alcoholic Dementia-Korsakoff's Syndrome	10.0	390,000
Normal Pressure Hydrocephalus	6.0	234,000
Intracranial Masses	4.8	187,200
Drug Toxicity	2.4	93,600
Post-Traumatic	1.7	66,300
Other Identified Dementing Disease	6.7	261,300
Pseudodementias	6.7	261,300
Dementia Uncertain	1.7	66,300
Total		3,900,000

dementia expected to occur in the USA in 1985 to be 144,000, of which about 56 percent (80,800 cases) could be presumptively labeled Alzheimer's type dementia.

Consider the forecast of (1985) dementia prevalence indicated in Table 11. The suggested prevalence of Alzheimer's type dementia (1,860,300 cases in 1985) is consistant with an incidence of about 102,000 cases in that year under the following assumptions:

- Prevalence rate (per population base) constant over the course of time
- 10 percent of the cases are "early onset" (before age 65 years) and these patients will exhibit an average life span of 10 years from disease onset
- 90 percent of the cases are "late onset" (after age 65) and these patients will exhibit an average life span of 15 to 20 years from disease onset.

One is left to suppose that there will be at least 80,800 new cases of dementia of the Alzheimer type in 1985 and perhaps 102,000 new cases (an additional 26 percent). During that year, new cases of dementia (all types) are likely to exceed 144,000.

Using the previously defined profile of diagnostic services that are appropriate for application to demented patients, and the current unit prices for these services, the cost of a diagnosis for the patient with dementia of the Alzheimer type (all other treatable causes of dementia ruled out) would be about $745.00 as indicated in Table 12. The average cost of diagnosis for other types of dementia patients would probably be less, since the full spectrum of diagnostic services would not be used. Under the assumption that the average cost of diagnosing these non-Alzheimer patients would be half of the total possible diagnostic cost, and using the "new case" incidence numbers above, the theoretical cost of diagnosing all new dementia cases in 1985 would be on the order of $84 million. In reality, this must be considered an over statement since not all dementia cases are diagnosed. The preliminary finding of one recent (unpublished) study conducted by the Columbus Chapter of the ADRDA suggest that more than 20 percent of the cases are not this rigorously diagnosed. Thus, the probable cost of diagnosing new cases of dementia in 1985 is more likely to fall in the range of $65 million to $85 million.

TABLE 12. THE PATTERN OF DIAGNOSTIC RESOURCE USE FOR A DEMENTED PATIENT[a]

Physician Services	$103.46
Laboratory Services	187.60
Diagnostic Radiology	322.27
Other Procedures	131.33
Total	$744.66

(a) Based on Table 6.

The occurrence of some dementia of the Alzheimer's type appears to be explained on a genetic basis. Confirmation of the presence of Alzheimer's disease at autopsy may, therefore, be an important finding for the victim's family. At current suggested prices and under the assumption of a stable prevalence rate the theoretical cost of performing a brain autopsy on all deaths of patients with dementia of the Alzheimer type in 1985 would be more than $24 million.

On the Present Cost of Care for the Demented Patient

Very few empirical studies have measured patterns of resource use associated with the care of demented patients. At least in the case of Alzheimer type patients without other co-existing morbidity, care does not involve clinical interventions with attendant use of highly skilled personnel and advanced technology. Rather, it is a question of an ever increasing need to support the normal needs of daily living. Such care does not logically fall within the classification of resource use normally reimbursed by health insurance carriers, nor does it suggest hospitalization until the patient reaches a terminal state. Thus, care givers typically include the family and paid personnel in the home during at least the first half of the disease course. During later stages of the disease, nursing home care becomes much more essential. The costs of this care are usually paid by Medicade or the family.

Direct Costs. The recent (unpublished) survey conducted by the Columbus Chapter of the ADRDA, suggests the use of various health care resources by "severely" impaired patients with

TABLE 13. PERCENTAGE OF PATIENTS WITH DEMENTIA OF THE ALZHEIMER TYPE USING VARIOUS CARE PROVIDER SERVICES (1984) (N = 149 Patients)

Provider Type	Percent Patients Never Used Service	 Once Used Service	 Now Using Service
Paid, in-home care	58	24	18
Day Care	92	3	5
Nursing Home	48	2	50
		Total Percent	73
		Percent Using No Services (family care)	27
		Total Percent	100

Source: Survey (unpublished) conducted by the Columbus, Ohio Chapter of the ADRDA.

Alzheimer type dementia as indicated in Table 13. Since there is no quantitative staging of the disease, there is no way to relate the findings in this sample of patients to a large population. Clearly, these patients are profoundly impaired and represent a cohort similar to the lowest estimates of "severe" impairment mentioned earlier. It is of interest, however that even in this cohort of limited size, 27 percent of the cases are receiving only family care. Although the attendant cost information may not represent a reliable national average, the cost of paid, in-home services appears to be bi-modal with (unskilled) "self-employed" providers costing \$2.00 to \$10.00 per hour and commercial services beginning at about \$7.00 per hour for the least skilled types. Day care facilities are relatively new on this scene and, thus, are not frequently used at this time. "Respite" institutionalization, the custodial placement of a patient for a week to a month, is an even newer concept and, therefore, not frequently observed. In this patient population the observed base cost of nursing home services in private institutions was \$1,508 per month in 1984 (standard deviation \$267, 45 observations).

In the absence of studies that tie the use of these services by demented patients to the population base, it is not possible to accurately estimate the national patterns of cost for this care. Some information about payments for clinical services such as resources used in the diagnostic process and the cost of therapeutic resources (generally related to the treatment of co-morbidity in the demented patient) could be derived from the data bases containing claims paid by third party insurance carriers. But reports of the use of such services by those with cognitive impairment have not been routinely produced and special changes in these data bases would be required. Medicare data base changes now underway may facilitate such reporting in the one to three year time frame. Patterns of resource use during the course of care that is supportive (rather than diagnostic or therapeutic) must be determined by studies specifically designed for that purpose.

Estimates of the cost of care at this time are, thus, qualitative at best. We postulate the following scenario as a qualitative estimate of the cost of care for demented patients in 1985, and invite the readers attention to the numerous untested assumptions that are implicit in its development.

Suppose that, using the most likely population estimates for 1985, we apply the prevalence rates published by the GAO (Table 10) as representative of patients with "great" and "extreme" impairment (a total of 3,876,400 patients). Further suppose that we accept the mid-range estimate of "severely" demented patients (Table 8) as the number of "extremely" demented patients (a total of 1,125,930) thus calling the difference between these two numbers (2,750,470) the number of "greatly" demented patients.

It has been reported that there were 1.316 million people, at age 65 or older, in nursing homes in 1982.[29] Based on the trend since 1977, we conservatively estimate that population to number 1.425 million in 1985. It has also been reported that 56 percent of those patients are demented.[29] We shall assume that those are either "greatly" or "extremely" demented patients and that this proportion of total nursing home residents is stable over the course of time until 1985. We arbitrarily assume that the 149 patients whose characteristic use of services gave rise to Table 13 are "extremely" demented, that their use of services is representative of the U.S. population as a whole and that this pattern of use will be stable until 1985. This enables us to identify the number of "extremely" demented patients in nursing homes in 1985 (562,965) as half of our "extremely" demented cohort (based on Table 13 data), and the number of greatly demented patients in nursing homes (237,835) which is the total number of demented in nursing homes less the "extremely" demented nursing home population. This leaves us to suppose that the other half of the "extremely" demented population, and the remainder of the "greatly" demented patients who are not in nursing homes (2,512,635), are being taken care of in their family environments.

Consider first the nursing home costs. In 1981, we are told,[40] the average cost per day for nursing home care was $37.46. Perhaps this will change dramatically by 1985, but let us suppose that the value of the dollar holds reasonably well and, coupled with efficiencies in nursing care, that contrives to create an average cost in 1985 of $43 per day ($15,695 per year) or about the present rate paid by Medicaid for skilled nursing home care. Since the annual cost of nursing home care is the number of cases times the annual rate, we then calculate an annual expenditure of about 8.836 billion dollars for the nursing home care of "extremely" demented patients in 1985, and about 3.733 billion dollars for the care of "greatly" demented patients. Summing and adjusting for the fact that all these patients are 65 years of age or older and about 10 percent of the total demented population is under this age, we arrive at a 1985 nursing home expenditure for demented patients of about $13.83 billion ($9.72 billion "extremely" demented, $4.11 billion "greatly" demented). But we are told that total nursing home expenditures in 1985 are estimated to be $38.9 billion.[40] If we assume that these expenditures are evenly distributed among the patients, then those who are demented (56 percent) should account for about $21.78 billion. We conclude that the total 1985 nursing home expenditures for demented patients will fall in the range of about $14 billion to $22 billion.

Turning attention to the cost of care in the home, and the cost of services suggested in Figure 1, we see that in 1977 the total cost of home services for the "extremely" impaired was $845 per month ($10,140 per year) and about $407 per month or $4,884 per year for "greatly" imparied people. If the value of the consumer (1967) dollar were 0.3 in 1985, this would translate into annual in-home care costs of $18,658 for the "extremely" impaired and $8,987 for the "greatly" impaired. But the average annual cost of institutionalization (identified as $5,496 in 1977[14]) would become only $13,182 which is about 84 percent of our previous nursing home cost estimate for 1985. If the numbers suggested in Figure 1 were scaled to match our estimate of 1985 nursing home cost, the resultant annual cost of in-home care for the elderly would be:

- "extreme" impairment - $22,203, and
- "great" impairment - $10,695.

Since both of these alternative set of numbers fall generally in the range of anecdotal reports of the present cost of in-home care we elect to continue the development of this scenario along both lines, calling calculations based on the former set ($18,658 and $8,987) a "low" estimate and those based on the latter ($22,203 and $10,695) a "high" estimate.

Using this approach and assuming that the cost of caring for the "impaired" elderly accurately reflects the cost of caring for the "demented" elderly, one may proceed to calculate the possible 1985 cost of in-home care, i.e., the product of cohort size times annual cost. These results, again adjusted to include those (about 10 percent) under age 65, are summarized in Table 14. It is essential to understand just what is included in this "cost". The GAO study identified all services used by the impaired person, regardless of who supplied them. Those performed by family members or friends, rather than by an agency, were costed at the (then) current price as if they had been supplied by "agencies".

TABLE 14. ESTIMATES OF THE "COST"[a] OF PROVIDING CARE FOR DEMENTED PATIENTS IN THE HOME

Impairment Level	Dollars in Billions "Low"[a] Estimate	Dollars in Billions "High"[a] Estimate
"Greatly"	24.84	29.56
"Extremely"	11.55	13.75
Total	36.39	43.31

[a] See text.

It would be useful to identify just how much of this cost was the result of paid (agency) help outside the family and friends. Both Figure 1 and Table 13 offer clues, but without agreement. Figure 1 suggests that (in 1977) for the care of patients with "extreme" impairment, 0.204 (20.4 percent) of the total cost went to "agency" services, and 0.796 (79.6 percent) was borne by family and friends. In the case of the "greatly" impaired, 0.295 (29.5 percent) of the cost went to agency services and 0.705 (70.5 percent) was borne by family and friends. Table 15 indicates the result of apportioning the total estimated cost of home care in this fashion.

TABLE 15. ESTIMATES OF THE "FAMILY" AND "AGENCY" COMPONENTS OF THE COST OF CARING FOR DEMENTED PATIENTS IN THE HOME (U.S.A., 1985)

Impairment Level	Dollars in Billions					
	"Low"[a] Estimate			High[a] Estimate		
	Family +	Agency =	Total	Family +	Agency =	Total
"Greatly" Impaired	17.51	7.33	24.84	20.84	8.72	29.56
"Extremely" Impaired	9.19	2.36	11.55	9.69	4.06	13.75
Total	26.70	9.69	36.39	30.53	12.78	43.31

[a] See text

Table 13, which we have previously assumed represents the use of services for "extremely" demented patients, suggests that, of those families not using nursing home services, 46 percent use paid in-home services (54 percent use no services). Yet, in the 1977 GAO study, only 20 percent of the families caring for the "extremely" impaired used agency services.[14] In that year, 29 percent of the families caring for the "greatly" impaired elderly used in-home services: a factor of 0.45 more agency use than for the care of "extremely" demented patients. Perhaps our estimate of the "agency" portion of home care cost is low. Perhaps, since 1977, increased availability of in-home services and greater awareness of them, on the part of the families, had led to their increased use. We may postulate the assumption that, in current times, the proportion of agency in-home care costs is .46 for "extremely" demented patients and 0.667 for "greatly" demented patients. Applying these factors to the apportionment of the total cost of in-home care for our "high" estimate yeilds an agency cost of $19.72 billion for "greatly" demented patients and $6.33 billion for "extremely" demented patients (total agency cost of $26.05 billion). We therefore conclude (Table 16) that the direct costs paid to nursing homes and agencies for the care of "greatly" and "extremely" demented patients may fall in the range of $24 billion to $48 billion. In light of the numerous untested assumptions implicit in this estimate, we cannot quantify the probable error bounds or ascribe any meaning to a median value. But our estimates of the costs of in-house services must be considered a "minimum" in light of the fact that other, less demented, people live at home also use such services.

TABLE 16. ESTIMATE OF THE COSTS OF NURSING HOME CARE AND "IN-HOME" CARE SUPPLIED BY AGENCIES FOR THE CARE OF DEMENTED PATIENTS (U.S.A., 1985)

	Dollars in Billions					
	"Low"[a]			"High"[a]		
Impairment Level	Agency	Nursing Home	Total	Agency	Nursing Home	Total
"Greatly" Impaired	7.33	4.11	11.44	19.72		
"Extremely" Impaired	2.36	9.72	12.08	6.33		
Total	9.69	13.83	23.52	26.05	21.78	47.83

[a] See text

Indirect Costs. There are a wealth of anecdotal reports of the hardships experienced by families with dementia victims. Jobs must be given up in order to maintain home care for the patient, savings must be depleted and finally dependence on Welfare must prevail. We find no published accounts of studies that relate the emotional hardships of these families to the overall population at large or, for that matter, that accurately quantify these costs in a significant population of families. During the course of our previous analyses of in-home agency costs, we developed an estimate of one tangible measure of in-direct cost: the value of in-home services provided by family and friends who care for an impaired (presumably demented) patient. Our findings in this regard are summarized in Table 17. Again, this must be considered a "minimum" since there are other, less impaired, people living at home to whom such services are provided.

TABLE 17. ESTIMATE OF THE MARKET VALUE OF IN-HOME SERVICES SUPPLIED TO DEMENTED PATIENTS BY FAMILY AND FRIENDS (U.S.A., 1985)

Impairment Level	Dollars in Billions	
	"Low"[a]	"High"[a]
"Greatly" Impaired	17.51	20.84
"Extremely" Impaired	9.19	9.69
Total	26.70	30.53

[a] See text.

The Sources of Payment for Care of the Demented Patient

Sources of payment for care of the demented patient include the Federal Government, commercial insurance carriers, state and local programs, and, of course, the patients and their families. Costs associated with the use of diagnostic services to identify an underlying cause of the dementia as well as the cost associated with therapeutic interventions for those causes that are treatable, are usually paid by insurance carriers, i.e., Medicare, Medicaid, and commercial carriers. There are, of course, a number of different co-payment and deductible policies among the various plans. Costs specifically related to claims in this disease group, dementia and its underlying causes, have not traditionally been separately accounted. Special analysis programs would generally be required to identify these costs in the present commercial insurance data bases. Changes now underway in the content of the Medicare data base and the mechanisms by which it may be accessed may lead to an improved capability to perform parts of such an analysis in the one to three year time frame.

The cost of custodial care, whether in institutions or in the home, is a more significant fraction of the total cost of this disease group. These costs are usually borne by the family, by Welfare-Medicaid programs, or by Federal hospitals (e.g., Veterans Administration facilities). Out-of-pocket cost to the families can only be assessed by sociodemographic surveys: there is no data base that accounts such expenditures as a matter of routine social policy. Studies in this arena have been initiated, but none have yet spanned a significant segment of demented patients or linked their cost findings to the national population base.

It is known that family resources become depleted in many cases of long-term custodial care, and that payment for such care is subsequently assumed by Welfare-Medicaid programs. At the present time, the expenditure of these funds are not accounted by category of clinical care at the Federal level. Thus, analyses of current data in this arena would require an assessment of each state's data base content and access capabilities. To the extent that local Welfare payment is involved, accounting by clinical disease category appears to be even less available.

On the Dynamics of Dementia Economics

Three factors exert a primary effect on the dynamics (variation over the course of time) of dementia economics:

- Population change
- Changes in the value of the dollar, and
- Changes in the pattern of care for the demented patient.

Perhaps the most predictable of these, and probably the most significant, will be population change. The segment of the U.S. population over 65 years of age is expected to increase 25 percent between 1980 and 1990 (10 percent between 1990 and 2000). In the decade between 1985 and 1995 the increase in population 65 years of age or older is expected to be on the order of 14 percent.

The least predictible of these changes over the strategic (10 to 20 year) time frame is the pattern of care. At this time, there appears to be a high probability that significant widespread change in diagnostic practice is at least five years away, and that definitive therapy is not likely to appear in the 10 to 15 year time frame. The development of a relatively non-invasive diagnostic tool with specificity for Alzheimer's disease will probably be the first indication of major forthcoming changes in the pattern of dementia economics. When such a development occurs, radical changes in the economics of dementia diagnosis can be expected in the subsequent five to ten year period and potential changes in the economics of therapy might be anticipated during the succeeding 20 years.

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FINANCING CARE FOR PATIENTS WITH ALZHEIMER'S DISEASE AND RELATED DISORDERS

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FINANCING CARE FOR PATIENTS WITH ALZHEIMER'S DISEASE AND RELATED DISORDERS

Karen Davis and Patricia Neuman

Alzheimer's disease and other forms of dementia inflict an enormous financial and emotional burden on patients and their families. The cause of Alzheimer's is not known, and no treatment is effective in stopping its relentless progression. Dementia can be totally devastating to close family members, causing the loss of the human quality of cognition and reducing the patient to total dependence on others.

Current programs to finance health care do little to lessen the financial burden of caring for such patients. Since the prevalence of the disease increases with age, the majority of Alzheimer's patients are age 65 or over and covered by Medicare. Medicare pays hospital, physician, and laboratory services required for the diagnosis or management of Alzheimer's patients -- but excludes the services that are required to provide or assist with everyday care. Prescription drugs, respite services, attendant care, personal care, adult day center care, and nursing home care are for the most part not covered by Medicare. Private health insurance similarly largely excludes such services. Medicaid does cover nursing home care for impoverished patients, and in some states other services in the home and community. Families have a choice of being emotionally bankrupt by providing all needed care directly or financially devastated by paying others for the care.

This paper sets forth a series of policy options that could reduce the financial strains on those families unfortunate enough to be struck by this devastating disease. These policy options range from modest changes in current governmental programs to more comprehensive solutions. Options also include incentives that government can provide to encourage family and voluntary efforts. Serious consideration of these options is urgent given the extent of the financial burdens, absence of current support, and loss of human dignity that Alzheimer's disease and other forms of dementia inflict.

I. Current Financing for Patients with Alzheimer's Disease

Assessment of the cost and sources of financing care for patients with Alzheimer's disease and related disorders is very inadequate. Accurate counts of the number of individuals with Alzheimer's are difficult to obtain. Estimates of the cost of providing adequate care are even less firm. Yet, concern about the potential budgetary impact of policy initiatives to provide assistance to Alzheimer's patients and their families is a major barrier to action. Continuing efforts to obtain more precise estimates of prevalence of Alzheimer's patients by degree of impairment, sources and extent of informal (unpaid) support, utilization of health and long-term care services, cost of providing health and long-term care services, and distribution of expenditures by type of patient, type of service, and source of financing should all be important elements of future research efforts.

A. Prevalence of Alzheimer's Disease

Definitive diagnosis of Alzheimer's disease at present can only be made by histologic confirmation obtained through performance of a cerebral biopsy or an autopsy. The ability to diagnose Alzheimer's clinically, however, has improved to at least a 90 percent assurance of accuracy through physical, psychiatric, and neurologic examinations, mental status testing, history taking, and laboratory tests including CT scan. (Ron et al., 1979) While this level of accuracy is technically feasible, few providers are trained in the latest methods, and many families do not receive clear cut confirmation.

Hope for new and better diagnostic methods has recently surfaced with the research finding that a protein has been found in the brains of 28 Alzheimer patients that is missing in normal brains. (Wolozin et al., 1986) This protein, labelled ALZ-50 antigen, may prove to be an effective screening tool -- particularly if it can be detected in the spinal fluid.

Best estimates indicate that about 2 million Americans currently have Alzheimer's disease. (Katzman, 1986) These include those with severe dementia (perhaps 700,000 individuals) and those with mild to moderate dementia. Alzheimer's patients represent about 55 percent of all patients with dementia or 2 million out of a total of 3.6 million patients with dementia. Other causes of dementia include vascular disease including multi-infarct causes of dementia (about 10 to 20 percent of cases), neurodegenerative disorders, and other causes.

Alzheimer's disease is diagnosed, in part, by ruling out other causes of dementia. The Department of Health and Human Services Task Force on Alzheimer's Disease concludes that a diagnosis of probable Alzheimer's disease requires the presence of dementia "established by clinical examination and documented by the Mini-Mental Test, Blessed Dementia Scale, or similar examination ... with evidence of deficits in two or more areas of cognition, progressive worsening of memory and other cognitive functions; no disturbance of consciousness ... absence of systemic disorders or other brain diseases that in and of themselves could account for the ... deficits." (McKhann et al., 1984)

Given the enormous care requirements of a patient with severe dementia of either the Alzheimer's or other types, dementia is a major cause of nursing home admission. One study estimated that 65 percent of nursing home residents met the clinical and mental-status criteria for dementia, and approximately 55 percent of deceased nursing home patients were found to have had Alzheimer's disease. (Katzman, 1986) If these estimates are applied to the entire nursing home population, approximately 0.7 to 1.0 million of the 1.5 million patients in nursing homes have Alzheimer's disease.

B. Care Requirements of Alzheimer's Patients

The types of health and long-term care services required by Alzheimer's patients depends upon the stage of progression of the disease (e.g. mild, moderate, severe dementia), the manifestations of the disease (e.g. irritability, agitation, depression, sleep disorders, incontinence, verbal and physical aggression), the presence or absence of caregivers in the home to provide assistance (e.g. supervision, personal care, administration of medications), and numerous other factors.

At the risk of considerable oversimplification, Alzheimer's patients and their families require the following types of services:

- Diagnosis of the disease -- physician visit(s) to take history, conduct physical, psychiatric, and neurologic examinations, formal mental health testing, and laboratory tests including CT scan.
- Management of the disease -- ongoing physician visits to monitor progress of disease, provide counseling, prescribe drugs for symptomatic treatment to help maintain the patient's socialization and ability of the patient to remain within

his or her family or social situation.

- Acute care -- hospital, physician, and other health and mental health care services required to treat any related or unrelated physical problems.
- Home or community based services -- adult day care centers, attendant care, or personal care to assist family members in their care of the Alzheimer's patient.
- Information and support -- hot lines, information clearinghouses, and self-help groups to provide educational and psychological support to caregivers.
- Respite services -- relief for caregivers for certain hours during the day or week, or vacations.
- Nursing home care for patients with severe dementia or behavioral disturbances for whom families are unable to provide care or for patients without able caregivers in the home.

C. Cost of Caring for the Demented Elderly

Two recent studies provide estimates of the prevalence of dementia among the elderly and the costs of caring for these individuals. (Hu, Huang, and Cartwright, 1986; Huang, Hu, and Cartwright, 1985) The studies included patients with all forms of dementia including multi-infarct dementia, but exclude patients under age 65.

The first study was based on a sample of 25 nursing home patients and 19 elderly living in their own homes. (Hu, Huang, and Cartwright, 1986) Nursing staff and family members maintained diaries of time spent in caring for the patient. Costs were for nursing home and home care services, but did not include hospital care, drugs, and physician services. The average annual cost of caring for dementia patients in the nursing home was $22,458 in 1983, with nursing staff spending 36 percent more time on the care of a demented patient than for other patients. The average annual cost of caring in the home was $14,815 for severe dementia patients and $6,515 for mild and moderate caseds of dementia.

In another study, estimates were made of the total economic cost of dementia among the elderly in the U.S. in 1983. (Huang, Hu, and Cartwright, 1985) They estimated that a total of 4.1 million elderly suffered from dementia in 1983. Of these, 795,000 were in nursing homes, 1.1 million were severely demented and in the home, and the remaining 2.2 suffered from mild to moderate dementia and were at home. They estimated that the total medical care costs of caring for these patients was $8 billion in 1983, including hospital care, nursing home care, physician services, drugs, and other medical care services. Informal home care services were valued at $26.7 billion (primarily the imputed value of time spent by family members, relatives, and friends), and formal care services from social service agencies at $1.1 billion.

Indirect costs such as the loss of life value through disability and early death were valued at $39 billion.

D. Current Financing Programs

Medicare and Medicaid are the major current public sources of financing for the care of Alzheimer's patients. Medicare covers most persons age 65 and over and those who have been permanently and totally disabled for two years or more.

Patients with Alzheimer's disease under age 65, however, may have considerable difficulty qualifying as disabled persons since eligibility is linked to Social Security Disability Insurance (SSDI) which offers minimal recourse to persons with various forms of dementia. SSDI is designed to provide working-age individuals who are permanently physically or mentally disabled with cash benefits. Eligibility for SSDI is difficult to obtain. It is granted if the applicant can demonstrate either that the condition and its level of severity is included in the "Listing of Impairments" or that the disabling condition precludes substantial gainful activity for a prolonged period of time. Alzheimer's is not listed as a disabling impairment. This places the entire burden of proof upon the applicant to demonstrate his or her inability to work. And, if SSDI eligibility is determined, applicants must wait 5 full months before receiving cash benefits, and another 24 months before becoming eligible for Medicare.

Medicare covers hospital, physician, laboratory, and other services. Psychotherapy services are covered up to a limit of $250 per year. Home health services are covered without copayments, but only under restrictive circumstances. Medicare's home health benefit is designed to exclude ongoing personal or attendant care; patients with a chronic, progressive disease like Alzheimer's typically do not even qualify for skilled home care services. Nursing home benefits under Medicare similarly do not apply to custodial care required for Alzheimer's patients. The average length of a covered stay under Medicare is only 30 days. (HCFA, 1985) This is a relatively insignificant benefit for the dementia patient with an ongoing need for care.

Medicaid covers those low-income persons meeting certain categorical restrictions (e.g. aged, disabled) and state income and asset standards. Its restrictive eligibility conditions preclude coverage of most Alzheimer's patients until progression of the disease requires placement in a nursing home and most financial resources of the patient are exhausted. It also reduces a spouse to poverty subsistence before Medicaid nursing home benefits apply.

Medicaid does provide intermediate care and skilled nursing home benefits. States may apply for a waiver to cover a wider array of home and community-based services if the cost of providing such services will be offset by savings from reduced nursing home use. As of July 1983, 45 waivers from 35 states had been approved. (Lave, 1985) No information is reported on how many individuals covered under waivers have Alzheimer's disease or related disorders. Many states have restricted the waivers to certain categories such as the mentally retarded or elderly. Relaxing the cost neutral provision would be required to provide much assistance to care for Alzheimer's patients.

Private health insurance coverage for services needed by persons with dementia is virtually nonexistent. MediGap insurance policies that supplement Medicare rarely cover either home health services or any nursing home days. (Rice, 1986) Recently private insurance companies have moved tentatively into offering limited nursing home coverage. These policies place strict limits on daily payments and length of maximum coverage (e.g. three years). Marketing efforts are targeted on attracting higher income, younger, and healthier individuals. Because of a concern with adverse selection and induced demand, companies charge high premiums with considerable loading. Many elderly incorrectly assume that Medicare covers nursing home care. Even when informed, older people have not responded to outreach efforts to enroll them in private long-term care plans. Insurance companies, on their part, are reluctant to offer home care and other custodial services most desired by families and patients.

E. Gaps and Inadequacies in Current Programs

Current programs, as important as they are, fail to meet the major needs of Alzheimer's patients. Major problems with current coverage include:

- Medicare does not cover all Alzheimer's patients -- especially those under age 65.
- Medicare's benefit package is not broad enough to cover the major health and long-term care services required by Alzheimer's patients.
- Medicaid is available only to those who are impoverished.
- Medicaid benefits, while broader than Medicare's, do not typically provide everyday care services in the home or respite services.

Current financing programs do not relieve the enormous emotional and financial burdens on Alzheimer's patients and their families. Elderly individuals living alone without children (about 25 percent of the 8 million elderly who live alone do not have children) are especially vulnerable to nursing home placement if they have Alzheimer's disease.

Private health insurance does little to remedy this situation. Because the disease destroys the ability of patients to care for themselves, the primary need is for supervision and personal care. Even in cases where family members are available to provide such services, the burdens of a "36-Hour Day" (Mace and Rabins, 1981) destroy the personal lives of caregivers and often lead to nursing home placement. About 72 percent of functionally disabled individuals residing in the community rely exclusively on family and friends for long-term care assistance. (Doty, 1984) Some long-term care providers, such as adult day centers, are unwilling to accept Alzheimer's patients. Financing of respite services and other services in the home and community to assist and give periodic relief to caregivers and nursing home care for Alzheimer's patients are top priorities for improvements.

II. Policy Options

The major decision facing any policy initiative to improve financing care is whether to restrict this initiative to Alzheimer's patients alone. A case can be made that dementia poses much more extraordinary burdens than other types of health problems requiring long-term care and is worthy of special attention. Many would question, however, the equity of improving coverage for patients with Alzheimer's disease, but not covering multi-infarct dementia, for example, that creates many of the same emotional and financial burdens. One strategy might be to cover Alzheimer's disease and related disorders including other forms of moderate to severe dementia. Another alternative would be to improve financing of long-term care for all patients meeting certain functional impairment criteria.

For the purposes of this paper, options will be set forth that address specifically the needs of Alzheimer's patients although the same approach, in many cases, could be extended to either all patients with dementia or all patients in need of long-term care.

Since Medicare and Medicaid are the major current sources of financing for health and long-term care services of Alzheimer's patients, several options focus on improvements in these programs. Other options provide targeted funds through new categorical programs. Finally, options to provide incentives for family and voluntary efforts are considered.

At this time it is not possible to provide careful cost estimates for these options. Such estimates would need to be developed for serious consideration of the options to proceed. After finalization of a desirable range of options, cost estimates might be requested from the Congressional Budget Office, the Health Care Financing Administration, or private organizations with long-term care financing cost modeling capabilities.

A. Incremental Improvements in Medicare

One approach would be to expand eligibility and benefits under Medicare to Alzheimer's patients. This option would not provide direct financing for nursing home care but would improve coverage for other services required by Alzheimer's patients.

1. Option 1: Medicare Expansion

The components of this option include:

- Expansion of Medicare eligibility to all patients diagnosed by certified Alzheimer's Evaluation Centers as having Alzheimer's disease or related disorders. This would involve waiving the two-year waiting period and listing Alzheimer's as a presumptive cause of disability. All Alzheimer's patients would be eligible for all Medicare covered services.
- Expansion of the Medicare benefit package to include an initial evaluation for Alzheimer's disease from certified Alzheimer's Evaluation Centers and development of a plan of care.
- Expansion of the Medicare benefit package to include adult day care services for Alzheimer's patients requiring continuous supervision.
- Removal of restrictions on home health benefits for Alzheimer's patients (e.g. unstable condition, intermittent care, need for skilled nurse or physical therapy services, homebound).
- Expansion of mental health benefits, including counseling for caregivers and raising the limit on covered expenditures.
- Addition of respite care services which would provide a specified number of days (e.g. 30 days

for patients with severe dementia) during the year which could be used by caregivers to spend time away from the Alzheimer's patient. Caregivers would be given the option of taking these in blocks of time (e.g. two weeks twice a year) or on a gradual ongoing basis (e.g. one-half day every week). Respite care could take the form of an attendant in the home during absence of the caregiver or placement in a suitable facility (nursing home or hospital).

2. Discussion

This option places primary emphasis on providing support to caregivers to postpone institutionalization as long as possible. It would provide for the sophisticated assessment of Alzheimer's disease to provide families with the best possible indication of the presence of the disease. Centers would develop plans of care that could be followed by family physicians, thus providing state-of-the-art guidance to physicians providing ongoing management of the patient. It would relieve families of the financial burdens of physician services related to the diagnosis and management of Alzheimer's disease, as well as acute care services required for the treatment of related or nonrelated physical problems.

Adult day care and respite care would reduce stress on caregivers. In some cases this is likely to postpone institutionalization. It would improve the quality of life for most caregivers. (Lave, 1985)

Its primary disadvantage, other than cost which is not currently estimated, is the involvement of the Medicare program in establishing standards for coverage and payment for a broader array of services -- assessment, adult day care, attendant care, respite care. Similar problems could emerge in defining new standards for expanding home health coverage. Expanding eligibility to patients with Alzheimer's disease and related disorders gives Medicare another diagnosis-specific category of patients (in addition to end-stage renal disease) which may not be the most efficient or equitable way to expand coverage.

B. Improvements in Medicaid

This option would build upon the basic framework of the Medicaid programs to improve coverage for Alzheimer's patients with low incomes. It would not apply to middle income families unless outlays for health and long-term care services impoverished the family.

1. Option 2: Medicaid Expansion

This option would include:

- Coverage of home and community-based services including case management, personal care services, chore services, attendant care, respite care, adult day care, home modification, home technological aids, and financial management services for Alzheimer's patients as a mandatory service under

Medicaid. This benefit would not be contingent on offsetting savings from reduced nursing home care, nor would it be restricted only to those qualifying for nursing home care.

- Expansion of income eligibility up to 300% of the Supplemental Security Income (SSI) individual or couple payment level for Alzheimer's patients.

2. Discussion

This option is also oriented toward improving coverage for Alzheimer's patients in the home and community. It would need to override current Medicaid statute restrictions prohibiting differentiation by diagnosis. Home and community-based services are now available on a limited waiver basis. Not all states have such waivers, and many are limited to certain population groups such as the mentally retarded. Implementation of this provision of the law has been delayed and hindered by administrative mechanisms. Further the benefit is restricted by the necessity of state assurance that the benefit will not add to total Medicaid outlays. As a result, home and community-based services are available only to a small proportion of low-income Alzheimer's patients. This option would automatically make the benefit available to all Medicaid beneficiaries with Alzheimer's disease.

Nursing home coverage is now available for patients with incomes up to 300% of the SSI payment level; the proposal would extend this income eligibility level to recipients of home and community-based services. An alternative would be to set an intermediate standard such as 200% of the SSI payment level. Expansion of Medicaid eligibility would assure that home and community-based services for Alzheimer's patients were available to all Alzheimer's patients eligible for nursing home benefits. This change would provide some protection for the caregiving spouse against the financial destitution that long-term care could bring.

Again, the major disadvantage of this option is that it would add to the cost of the Medicaid program. Some incentives or standards would need to be developed to assure that services provided were not in excess of legitimate needs. Provisions would need to discourage total substitution of informal care for paid care. For example, a per person dollar cap might need to be set on home and community-based services to assure that they did not exceed the cost of nursing home care. This dollar cap might vary with the degree of disability of the patient. The benefit might draw on the design of the hospice benefit, since states have the option of covering hospice services under Medicaid.

C. Major Long Term Care Reform

Another approach to financing care for Alzheimer's patients would be comprehensive reform of long-term care financing to address institutional care financing as well as services in the home or community. Several major long-term care financing options have surfaced recently. These options could be redesigned to apply only to Alzheimer's patients -- rather than the proposed extension to all elderly and disabled people.

1. Option 3: Medicare Coverage of Long-term Care

This option has been proposed by two major recent studies. It would add a new part of Medicare covering a comprehensive long-term care benefit package. (Davis and Rowland, 1986; Harvard, 1986) The major features of the option include:

- Covered benefits include nursing home care (both in qualified skilled nursing facilities and intermediate care facilities), expanded home health services (without many of the restrictions in the current Medicare program), and day hospital services.
- Benefits would be subject to a coinsurance charge (such as 10 to 20 percent) and would have a ceiling on out-of-pocket costs.
- Coverage could be mandatory or voluntary, with provisions to prevent adverse risk selection.
- Financing would be through an income-related premium or through a combination of payroll tax revenues, federal general revenues, and premiums.
- Cost control mechanisms would be incorporated

in the form of assessment teams to determine eligibility for benefits and prospective payment of long-term care providers.

- A direct grant program to public and nonprofit community organizations would provide home help services such as attendant care, personal care services, and chore services.
- Medicaid long-term care coverage would continue as a residual program for those low-income people not choosing to purchase Medicare coverage.

2. Option 4: Canadian Model of Long-term Care Financing

Rosalie A. Kane and Robert L. Kane have studied universal long-term care benefits in three Canadian provinces (Ontario, Manitoba, and British Columbia) and suggested that a similar approach would be feasible and desirable in the U.S. (Kane and Kane, 1985) The Kanes note that universal long-term care insurance in Canada replaced an earlier system of long-term care for the indigent. While each provincial program is slightly different, the major features of this approach as applied to the U.S. would include:

- Federal block grants to states for long-term care.
- State universal long-term care insurance to all individuals regardless of age or income.
- Benefits based on degree of functional impairment, including nursing home care,

home nursing services, and homemaking services.

- Patients copayments of $10 to $15 daily for nursing home care.
- Payment to nursing homes by level of care (e.g. Level I -- personal care; Level II -- intermediate care; Level III -- psycho-geriatric care; Level IV -- extended care for patients who can not get out of bed) and type of facility. Facilities may be paid on a negotiated per diem rate or a negotiated budget basis.
- Access to services would be determined on the basis of assessment by specified gatekeepers such as physicians, care managers, or home care coordinators.
- Homemaking services would be limited to a fixed number of hours per month or maximum cost not to exceed nursing home care. Home care would be free to the patient.
- Home nursing and homemaking services would be either provided by salaried public employees or purchased from for-profit or nonprofit agencies.

3. Option 5: Governmental Reinsurance of Private Long-Term Care Insurance

This option would set standards on private long-term care insurance as a condition for federal government reinsurance. Reinsurance protection against adverse risk selection or high expenses could be in the form of a stop-loss provision that would protect private plans against losses above a given corridor or could assume coverage once some threshold was passed (e.g. three years of nursing home care or $100,000 per beneficiary).

4. Discussion

The major source of financial burden for the care of Alzheimer's disease is nursing home care. While enabling as many people as possible to continue to function in the home is a desirable objective, it is an unrealistic goal for many Alzheimer's patients -- particularly those in advanced stages of the disease. Therefore, some form of major long-term care financing reform will be required to provide adequate financial protection to families of Alzheimer's disease.

Each of the long term care reform options listed above would address coverage of nursing home care. All options would all provide financing for a broad range of long-term care services, including nursing home care. Coverage would not be conditional on meeting an income eligibility test. Each would require some modest patient financial contributions toward nursing home care.

These options have the advantage of removing the serious financial burdens that Alzheimer's patients and their families bear. They are undoubtedly costly and would require substantial public budgetary outlays. Sources of revenue would need to be identified to meet these outlays. In addition, all of the options entail establishing mechanisms for assessing patient functional impairment for the purposes of defining eligibility and matching services to patient needs. Each option is likely to improve the available supply of long-term care services and choices among willing providers. However, to prevent abuses, quality control and payment provisions would need to be carefully designed.

Each option would reduce dependence of middle income elderly on Medicaid by reducing the likelihood of spend-down. It would expand service options currently open to older Americans.

Option 5 might induce more private long-term care insurance, and would prevent some abuses in the market by guaranteeing some minimum standards on private coverage. It is still likely to cover only a limited number of those at risk, and private companies could be expected to continue their current efforts to attract relatively low-risk individuals.

D. Payment and Service Delivery Reform

Another set of policy options could be restricted to improving payment methods and incentives for service delivery reform in the current Medicare and Medicaid programs. The two main options are expanding capitated payment of acute and long-term care services through Social Health Maintenance

Organizations (SHMOs) or other capitated arrangements and reform of nursing home payment to address the substantial care requirements of Alzheimer's patients.

1. Option 6: SHMOs/Life Care Communities/Capitation

Currently, Medicare is testing the Social Health Maintenance Organization concept on a demonstration basis. Under this concept, SHMOs are paid a fixed capitation rate for a defined enrolled population, and in turn provide an array of long-term care services including nursing home, home health, homemaker, respite and other services. At least initially, SHMOs will limit their financial risk with both a maximum per person payment for long-term care services and copayments. If this proves successful, one option would be to institute this option on a nationwide basis.

Life care communities might also be candidates to receive capitated payments from Medicare and/or Medicaid. These organizations assume financial risk for acute and long-term care services not covered by Medicare, as well as providing housing for nonimpaired individuals. There is some evidence that the services of such organizations including on-site nursing care, part-time physician care, and nursing home beds reduce reliance on hospital care. A capitated rate from Medicare could permit these savings if realized to be channeled into a broader range of care services.

The main advantage of a capitated approach is that it may save money by reducing inappropriate use of hospital, nursing home, and other medical services. Managed care offers patients more of the services they want and need to remain in the community and at home. It avoids restrictions in Medicare and Medicaid that are not conducive to providing the patient with appropriate services. As yet, however, the extent of patient interest and the feasibility of cost savings have not been demonstrated.

2. Option 7: RUGS and Nursing Home Payment Reform

Another option would be to change the way that nursing homes are paid under the Medicaid program. Currently, states have a great deal of latitude in establishing nursing home payment methods. A few states, such as Maryland, use graduated levels of patient care requirements as a basis for payment. Others use uniform per diem payment rates that discourage nursing homes from taking complicated care patients such as Alzheimer's patients.

A new patient classification system, RUGS-II, uses an Activities of Daily Living index and distinguishes between dementia patients who need intermittent and constant supervision. Payment is in accordance with the amount of care required.

This option is not exclusive of other options and could be a part of any long-term care reform package.

E. Targeted Programs

The above options are financing options that emphasize a public insurance or entitlement approach to long-term care. Another approach is creation of a categorical program for care of Alzheimer's patients that would target funds on selected supportive activities -- rather than financing care directly.

1. Option 8: Evaluation Centers, Training, Research, Coordination, Clearinghouse, Hot Line, Support Groups, Voluntary Service Exchange Banks

This option would authorize specific sums of money to be appropriated annually to support the following activities:

- Evaluation: One or more centers would be established in each State to do state-of-the-art diagnosis and plan of care for individuals suspected of having Alzheimer's disease or a related disorder. The centers would provide services and would not necessarily correspond with the current Alzheimer's centers that conduct research.
- Training: Fellowships to enable geriatric training programs to have sufficient experience dealing with Alzheimer's disease would be established for physicians and nurses.
- Research: The number of Alzheimer's research centers funded through NIA would be increased from 10 to 20 centers.
- Coordination: States would apply for up to 10 grants to improve the coordination of services for Alzheimer's patients and develop improved

public education programs on diagnosis and treatment of the disease.

- Clearinghouse: A national clearinghouse for Alzheimer's disease and treatment would be established to provide current information on research and treatment progress to states, providers of care, and patients and families. The clearinghouse would provide a toll free hot line number to provide information and counseling to families dealing with patients.
- Support Groups/Service Exchange: Funds would be used to organize Alzheimer's support groups. Funds would also support the development of volunteer service exchange programs to provide respite services to caregivers.

2. Discussion

This option is relatively low cost (probably less than $100 million) and controllable since funds would be appropriated annually through the normal budgetary process. It would assure the availability of qualified professionals and centers to provide state-of-the-art knowledge, diagnosis, and care plans. It could complement other options by assuring the availability of qualified personnel and contributing to the development of quality standards.

F. Tax Subsidies

Another policy approach is to provide tax subsidies to provide incentives to individuals to finance long-term care privately. Tax subsidies result in foregone tax revenues and contribute to the federal budgetary deficit in the same way as direct federal budgetary outlays. They should be analyzed like any other governmental expenditure program. Two types of tax subsidies warrant consideration: tax subsidies to encourage private savings for long-term care through individual retirement accounts (IRAs) restricted to the payment of long-term care expenes and tax subsidies to encourage family members to provide or contribute financially to long-term care of Alzheimer's patients.

1. Option 9: Individual Retirement Accounts

Currently, an individual may set aside $2,000 annually in an IRA and exempt this contribution from taxable income. Taxes are deferred until savings are withdrawn after age 59. This results in substantial benefits to the individual (and substantial tax loss to the Federal treasury) because taxes are deferred until some point in the future when marginal tax rates in the retirement years are presumably lower. IRA savings may be used for any purpose. To encourage the targeting of IRA savings on long-term care, the following provisions might be adopted:

- o IRA savings withdrawn and used for health or long-term care savings after age 59 could be treated as exempt from income taxation. IRA savings withdrawn and used for other purposes would be counted as at present as a form of taxable income.

- The current provision that savings must be withdrawn by age 70 1/2 could be extended to age 75 when individuals are more likely to require long-term care.
- Restrict withdrawals from the IRA for the sole purpose of paying long-term care expenses.

2. Discussion

Option 9 has the advantage of encouraging individuals to save for future long-term care expenses. It would give families the flexibility to use savings for those services that they feel best meet their needs. It encourages the private sector to develop and market more services.

Experience with IRAs suggest that they do little to increase total savings -- but rather shift savings from one form to another. In 1984 15.4 million taxpayers contributed to IRAs. These were predominantly higher income individuals. Option 9 is likely to result in large tax breaks to higher income individuals and to provide little assistance to lower income individuals in greater need of long-term care. These options do not pool risk across individuals and provide no assurance that savings will be adequate to meet long-term care needs.

3. Option 10: Tax Subsidies to Families Contributing to the Care of Alzheimer's Patients

Another approach would be to provide subsidies to families contributing either in kind or financially to the care of Alzheimer's patients. Two provisions might be considered:

- An additional tax exemption for dependents with Alzheimer's disease.
- Permit adult children of Alzheimer's patients to claim an itemized deduction (or exemption from income) for financial contributions toward medical equipment, drugs, home hedalth, personal and nursing home care. This would not be conditional on demonstrating that the parent was a dependent or that the adult child contributed more than 50 percent toward the care of the parent.

4. Discussion

This option would provide families with modest financial rewards for providing care to Alzheimer's patients. It offers some means to purchase respite and other services, and may offset some expenditures that would otherwise eventually be paid by the Medicaid program. It is an expansion beyond the current dependent care tax credit deduction for disabled elderly. This tax credit is set at 20 to 30 percent of expenditures up to a maximum of $2,400.

Its major disadvantages are that it results in foregone tax revenues, benefits higher income individuals more than lower income individuals, and provides only minimal help to families in greatest need. Unlike direct expenditure programs, tax subsidies do not provide any opportunity for controlling the price or assuring the quality of long-term care services.

III. Summary

Providing and paying for the care of people afflicted with Alzheimer's disease and related disorders has become an immense unsolved social problem. It tests the very mettle of the nation's commitment to social justice and to ensuring individual dignity. No other illness carries the same emotional burden, extraordinary cost of care, loss of human dignity, and dearth of services most needed by patients and their families. No American is immune from the threat of this tragedy in his or her own family. Continued inaction undermines the image of this nation as a caring and compassionate society. All of us have a common stake in assuring a better future for Alzheimer's patients and their families.

Decisions regarding long-term care policy reform are inevitably contingent upon costs. Reluctance to incur high costs has been and will continue to be a deterrent to policy action. There is a need for more information about the costs of alternative options, about which services work best and are most needed by families, and which are most cost-effective. Little is known about the possibility of offsetting savings to Medicaid or to the health system through a well-conceived and well-managed system of care for dementia. The research and analysis necessary to obtain this information should be pursued aggressively.

The policy options set forth in this paper run the gamut from modest initiatives to comprehensive reforms and from direct governmental outlays to governmental subsidies for private activities. Each has its own advantages and disadvantages. This list of options should be refined and their merits more closely scrutinized.

Policy officials need to come to some resolution regarding the basic strategy for action -- incremental improvement in existing programs as budgetary resources permit or a sweeping reform replacing current programs. Even a modest first phase building the necessary infrastructure would be preferable to continued inaction.

The current system causes emotional and financial devastation to millions of Americans. It is hoped that the policy options set forth in this paper will focus debate on feasible and desirable policy actions to relieve these burdens.

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DEMENTIA AMONG NURSING HOME PATIENTS: DEFINING THE CONDITION, CHARACTERISTICS OF THE DEMENTED, AND DEMENTIA ON THE RUG-II CLASSIFICATION SYSTEM

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As the population ages, the condition of dementia is receiving renewed attention. This attention is motivated by several factors:

- Dementia is a disabling condition which affects the quality of life of the affected.
- The number of demented persons is increasing as the aged population increases and the resources needed to care for the demented will consequently increase.
- Several dementia conditions have onset before "old age".

In this paper, three topics are presented with the aim of increasing understanding of the demented patient. These topics are:

- Defining the condition dementia.
- Characteristics of the demented patient.
- Dementia within the RUG-II Classification.

Each of these topics are developed with application to a data base of nursing home patients in 52 New York nursing homes.

THE DATA BASE

The data base used in the analysis is the N.Y.S. Case Mix Reimbursement Project Patient Assessment Instrument (P.A.I.). This data base was constructed for purposes of developing a classification system for long term care patients. The data was collected in 1984. The data base contains detailed information regarding patient characteristics and resource consumption data on 3427 long term care residents in 52 New York State facilities. The goal was to establish a case mix classification system which accurately groups patients with similar characteristics and similar cost of care.

Facility Selection. Facilities were selected to be representative in terms of location, size, type of ownership, type of sponsorship, levels of care, and staffing patterns. Proprietary and voluntary, large and small, rural and urban: the mix covered the entire spectrum. In addition, all the facilities that were chosen met New York State quality assurance standards. Because of the need to carefully review patients with higher disability levels, however, the patients selected within these facilities was purposefully skewed to a higher than average disability level. The patient sample constructed because of this "purposeful" sampling was not random. The sample is complete in that the many varieties of patient types in long term care facilities are represented in it. What is lost is the statistical property of proportionality of sub populations that a random sample promotes.

Assessment Instrument. A 10 page Patient Assessment Instrument (PAI), designed for optimal reliability with detailed definitions on the face of the instrument, was used to collect patient-characteristic specific data on a variety of patients. Questions were carefully chosen to establish a comprehensive data base encompassing all features important in distinguishing residents' resource use. Input from over 200 clinicians, providers and national health care researchers was solicited and incorporated into the final assessment instrument.

Staff Time Measurement. Using a modified time and motion study technique, facility staff recorded the amount of time spent during a 24 hour period with each patient. Information on direct and indirect nursing care time, as well as other professional services such as occupational and physical therapy and social services, was also collected.

Data Collection Reliability. High reliability of the data was insured through a comprehensive program with training sessions, a step-by-step training manual, pretest of all aspects of the data collection process, in-facility reliability checks, telephone monitoring by Case Mix Staff, data were audited on site for reliability by independent Case Mix Nurse Reviewers.

How Representative is the Data Base? As stated, the need for a "purposeful" sample for development of a classification system placed emphasis on assuring that higher than average disability level patients were included in the data collection. The impact of this design on the reliance placed on results from other analysis of the data is uncertain. The strongest statement that can be made is that the sample is not random and the statistical attribute of "proportionality" that a random sample affords cannot be inferred given the design. Comparison of this data base to others collected in long term care by Case Mix Project Staff revealed that there was high relative agreement between "proportions" in this data base and the others and that there the PAI data was not heavily skewed in any dimension.

DEFINING THE CONDITION DEMENTIA

Any illness, including dementia, is both a medical condition and a severity. In this section of the paper, definitions of both the medical condition and its severity are presented.

The Dementia Medical Condition.

Medical conditions are characterized by the diagnosis assigned to the patient by health care professionals and more centrally, the physician. A diagnosis represents a conclusion to a study of a patient including their symptoms and values of tests performed on the patient. The medical condition dementia spans many different diagnosis under the ICD-9 CM coding system. For many diagnosis codes, the judgement that the disease represented by the code meets the conditions of dementia is straightforward while for others, the decision is more difficult. The judgement requires knowledge of the clinical manifestations of the disease and comparison of these to the definition of dementia.

In Table 1, a list of diagnoses identified as meeting the medical condition of dementia are listed. This list was developed on review of the ICD-9 CM coding system and consultation with clinicians. Patients who have one or more of the diagnosis listed, whether as primary, secondary, or tertiary are considered to meet the medical condition of

Table 1.

ICD-9-CM Code	Dementia Diagnosis Diagnosis
290.0	(not 290) Senile dementia, uncomplicated senile dementia; NOS, simple type excludes mild memory disturbance
290.1	Presenile dementia Brain syndrome with presenile brain disease Dementia in: Alzheimer's disease Jakob-Croutzfeldt disease Pick's disease of the brain
290.10	Presenile dementia, uncomplicated presenile dementia, NOS, simple type
290.11	Presenile dementia with delirium Presenile dementia with acute confusional state
290.12	Presenile dementia with delusional feature
290.13	Presenile dementia with depressive features
290.2	Senile dementia with delusional or depressive features
290.21	Senile dementia with depressive features
290.4	Multi-infarct dementia
290.40	Arteriosclerotic dementia
290.41	" " "
290.42	" " "
290.43	" " "
294.0	Wernicke-Korsakoff syndrome (non-alcoholic)
294.8	Other specified OBS
294.9	Unspecified OBS
310.1	Organic personality syndrome
310.8	Other specified non-psychotic mental disorders, following organic brain damage

Code	Diagnosis
310.9	Unspecified non-psychotic mental disorders following organic brain damage
331.0	Alzheimer's disease
331.1	Pick's Disease
331.2	Senile degeneration of brain
331.3	Communicating hydrocephalus
331.7	Cerebral degeneration in diseases classified elsewhere
331.8	Other cerebral degeneration
331.9	Cerebral degeneration, unspecified
331.89	Cerebral degeneration, NEC
333.4	Huntington's Chorea
437.0	Cerebral atherosclerosis

dementia. In the PAI data base, 41.1 percent of the patients were found to meet the medical condition of dementia.

Missing from this medical condition definition of dementia is a measure of the severity of the condition. This missing element is common to most diagnosis recording systems. In the area of mental incapacity or impairment (such as dementia), severity is an important element in measuring the disability caused by impairment. In the next section, a symptom severity measure is presented and combined with the medical condition definition.

Symptom Severity of Dementia

The need for a severity measure of dementia became apparent when the medical condition definition was applied to the PAI data base. Patients with the medical condition dementia were found to be highly diverse with respect to measures of ADL status, mental status and social interaction. Patients with dementia were found to have no impairments in ADLs, mental status or social interaction despite the diagnosis of dementia.

As a consequence of this diversity, it is difficult to characterize the dementia patient since the "typical demented patient" is an average across a wide range.

Establishing a severity measure for dementia requires return to the basic elements used in reaching the diagnosis. The PAI data base contains five dimensions which are symptoms of dementia; expressive communication, receptive communication, learning ability, motivation, and cooperation with others. For each dimension, descriptors of the interference or impairment level of the condition are used. These five dimensions, when taken together, measure the severity of dementia in a patient. A patient with a low level of impairment in any one of the dimensions and no impairment in all others has a lower severity level than one who has a high level of impairment in all. To combine the descriptions from five dimensions to a single score requires the assignment of numerical values to descriptors. These number values must be assigned so that equal impairment levels across all dimensions are given the same number so that the contributions to the composite score are equivalent.

In Table 2, the five mental dimension questions from the PAI with the descriptors available and the number level assigned to the descriptors are presented. The composite scale, given the number assignment, can range from 0 to 15 with the high score representing a high level of impairment and a 0 score indicating no impairment related to dementia.

While the focus of the severity score is the demented patient, patients without a medical condition of dementia (that is, diagnosis), can also be rated using the scale. A comparison of the distribution of scores between patients with the medical condition dementia and those without (Table 3) shows that the score for the demented group is significantly higher than for the non-demented; only 6.0 percent of demented patients have a zero severity score compared to 33.5 percent for the non-demented.

The contrast between populations also shows that in the demented population, the patient distribution across symptom score is relatively uniform while for the non-demented, the distribution is very skewed towards lower score. This clearly illustrates the need to characterize

Table 2
Symptom Score Assignment

Question	Descriptors	Score Value
EXPRESSIVE COMMUNICATION - General Method of Conveying Information to others in own language (e.g. English, Spanish)	1. Speaks and is generally understood.	0
	2. Speaks, but is understood with difficulty.	0
	3. Uses only structured sign language, writing, or yes or no responses.	0
	4. Uses only gestures, grunts, or primitive symbols to communicate. This includes a special cueing system developed with the patient. (e.g. aphasiac).	1
	5. Cannot convey needs, (e.g. comatose).	2
	6. Cannot Determine.	0
RECEPTIVE COMMUNICATION/ COMPREHENSION - General Method of Understanding Information Conveyed by others in own Language (e.g. English, Spanish)	1. Generally understands oral communication.	0
	2. Has limited comprehension or oral communication; needs repetition or simplified explanations.	1
	3. Depends on lip reading, written material, or structured sign language.	0
	4. Understands only primitive gestures, facial expressions, simple pictograms, and/or recognizes environmential cues.	2
	5. Unable to understand or no indication by patient (e.g. comatose).	3
	6. Cannot Determine	0
LEARNING ABILITY - Process of Understanding and Retaining Concepts or Instuctions	1. Listens, retains, and comprehends directions or teaching instruction. Knows what to do and when.	0
	2. Difficulties retaining or comprehending instructions. Needs clues or continuous reminding.	1
	3. Cannot comprehend and retain instructions. Must be shown every time.	2
	4. Cannot comprehend and retain	3

	instructions. No instructions given.	
	5. Cannot determine.	0
MOTIVATION - Process of Stimulating One's Self to Perform Activities Without External Influence	1. High - initiates activity, keeps appointments, willing to tolerate discomfort/pain to achieve goals.	0
	2. Moderate - Will work toward goals but needs to external support and urging.	0
	3. Minimal - Passive, participates in activities when told to when it is required. Activites may be performed in a slow, mediocre or inaccurate fashion.	1
	4. Poor - Resists activity, feels someone else should do everything.	2
	5. None - Due to organic causes.	3
	6. Cannot determine.	0
REFUSAL TO CARE FOR ONE'S SELF - Physically Capable but Mentally unwilling to Perform Routine Activities (This is not due to Physical Limitations)	1. Performs routine activites (e.g. ADL's) to the extent physically capable.	0
	2. Performs routine activities (e.g. ADL's) but not to the extent physically capable. Activities are performed incompletely or of mediocre quality.	0
	3. Resists assistance by others in performing routine activities (e.g. ADL's), though needs assistance from others.	0
	4. Refuses to perform routine activities (e.g. ADL's), of which physically capable. Staff must perform the activities.	0
	5. Unable mentally to perform routine activities (e.g. ADL's) regardless of willingness.	4

TABLE 3

SEVERITY SCORE DISTRIBUTION
DEMENTED AND NON DEMENTED PATIENTS
ENTRIES IN TABLE ARE PERCENT OF PATIENTS

	Severity Score															
Population	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Demented	6.0	7.0	9.0	7.8	5.8	4.0	3.5	4.4	5.7	6.2	12.1	8.8	4.6	3.6	2.1	9.6
NonDemented	33.6	14.6	13.9	8.6	4.5	1.9	1.7	3.5	3.0	3.1	4.4	2.6	1.8	.4	.4	1.9

both the diagnosis and severity of dementia before undertaking analysis of the dementia population. The diagnosis defined demented population is far from homogeneous and analysis needs to accomodate this non-homogeneity.

Using the criteria of equal score intervals in each dementia severity category, and a category of zero score, the following severity categories are proposed as a baseline for analysis.

Severity Category	Severity Score
None	0
Low	1-5
Middle	6-10
High	11-15

The percent of medical condition dementia patients by severity category in the P.A.I. data base is as follows:

Severity Category	Percent of Demented Patients
None	6.0
Low	33.5
Middle	31.8
High	28.7

In the next section, tables contrasting the characteristics of the demented and non-demented nursing home patient are presented. The demented population of patients is presented as a whole using only the medical condition definition of dementia and sub groups of the patient with dementia using the above severity categories.

CHARACTERISTICS OF THE DEMENTED PATIENT

In this section of the report, characteristics of the patient with dementia are presented using the medical condition definition of dementia and the combined medical condition-severity score definition. For contrast, the same characteristics for the non-demented patient are presented in the same table.

The format of the tables is simple. Each table is on a separate page. At the top of the page is the P.A.I. question as it appears on the assessment instrument. In the middle of the page is a table showing the response distribution for the demented and non demented population. Entries in the table are the percent of patients within the population sub group. At the bottom of each page is a brief comment on the findings revealed from the data presented.

The tables show that the demented population has greater problems in most dimensions than does the non-demented. As the severity of the dementia as measured by the severity score increases, the disability or impairment level of the patient in ADLs, communication, and behavior also increases. A positive correlation between the severity of dementia and measurement of ADL ability is most notably observed.

In the next section, dementia within the RUG-II system is explored.

DEMENTIA WITHIN THE RUG-II CLASSIFICATION

The RUG-II Classification is a patient classification system for long term care patients. Groups of patients within the RUG-II classification are similar with respect to both patient characteristics and resource consumption. (For details on RUG-II, see An Overview of the New York State Long Term Care RUG-II Case Mix Reimbursement System, Long

TABLE 4

SEX OF PATIENT

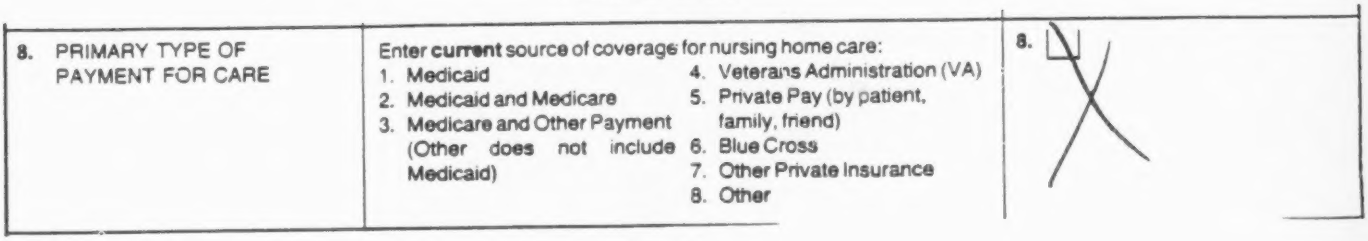
6. SEX OF PATIENT	Enter: 1. Male 2. Female	6. ☐

Response

Population		Male	Female
Demented		17.6	82.4
Severity:	None	17.1	82.9
	Low	22.9	77.1
	Middle	15.8	84.2
	High	13.5	86.5
Non-demented		24.5	75.5

Comments: Higher percentage of demented patients are Female.

TABLE 5
PRIMARY PAYOR



8. PRIMARY TYPE OF PAYMENT FOR CARE	Enter **current** source of coverage for nursing home care: 1. Medicaid 2. Medicaid and Medicare 3. Medicare and Other Payment (Other does not include Medicaid) 4. Veterans Administration (VA) 5. Private Pay (by patient, family, friend) 6. Blue Cross 7. Other Private Insurance 8. Other	8. ☐

RESPONSE

Population		Medicaid	Medicaid/ Medicare	Medicare/ Other	VA	Private	Blue Cross	Private Insurance	Other	Demonstration
Demented		69.3	8.4	.4	.4	20.3	-	-	.4	.9
Severity:	None	78.1	2.4	-	1.2	15.9	-	-	2.4	-
	Low	66.9	10.2	.7	.7	19.7	-	-	.4	1.5
	Middle	67.3	8.0	.2	-	23.1	-	-	-	1.4
	High	72.7	7.9	.3	.3	18.7	-	-	.3	-
Non-demented		67.2	10.1	3.7	.6	15.5	.4	.4	.7	1.4

Comments: Essentially no difference in payors between the two populations.

TABLE 6
MARITAL STATUS

9. MARITAL STATUS AT INITIAL ADMISSION TO FACILITY	Enter whether patient was at initial admission to this facility: 1. Married (spouse was alive) 2. Widowed 3. Single (never married) 4. Separated 5. Divorced 6. Cannot Determine	9. ☐

RESPONSE

Population		Married	Widowed	Single	Separated	Divorced	Cannot Determine
Demented		15.6	66.6	12.4	1.7	3.3	.4
Severity:	None	13.4	61.0	17.1	1.2	7.3	-
	Low	11.5	68.4	13.4	1.7	4.1	.9
	Middle	17.4	65.0	12.4	2.5	2.3	.2
	High	18.7	67.3	10.4	.8	2.8	-
Non-demented		14.7	59.8	18.5	1.7	5.1	.2

Comments: Essentially no difference in marital status between the two populations.

TABLE 7

ADMISSION LOCATION

List

For 11A, 11B, and 11E enter:

01. Own Home/Apartment – Alone
02. Own Home/Apartment – With Spouse, Family, Friends or Home Health Aide.
03. Home/Apartment of Another Person
04. Adult Home (also called Domicillary Care Facility (DCF)
05. Health Related Facility (HRF)
06. Skilled Nursing Facility (SNF)
07. Rehabilitative Facility
08. Psychiatric Facility
09. Hospital (Acute Care)
10. Hospice
11. Other
12. Not to be Discharged
13. Cannot Determine

Population	Home Alone	Home w/ Others	Home Another	Adult Home	ICF	SNF	Rehab Facility	Psych Facility	Hospital	Hospice	Other	Cannot Determine
Demented	5.5	10.6	5.5	3.6	14.3	8.1	.2	2.4	49.2	.1	.4	.2
Severity: None	6.1	9.8	6.1	3.7	9.8	9.8	-	-	54.9	-	-	-
Low	7.8	10.0	7.1	3.7	9.5	9.5	.4	1.7	49.6	.2	.2	.2
Middle	5.3	9.8	4.6	3.0	18.8	6.9	-	2.8	48.3	-	.5	.2
High	3.0	12.4	4.6	4.3	16.0	7.3	-	3.3	48.6	-	.5	-
Non-demented	8.1	9.0	7.5	2.9	8.7	8.9	1.4	2.1	50.3	-	.7	.4

Comments:

TABLE 8
VISION

17. **VISION** - ABILITY TO SEE WITH CORRECTIVE LENSES, **IF GENERALLY WORN,** AND IN GOOD LIGHT	1. Sees Well - (can see newsprint). 2. Sees Adequately in Most Situations (e.g., can see headlines, can see television). 3. Moderate Loss - Can see obstacles in path and surrounding environment (e.g., cannot see newsprint, can see fingers at arm's length). 4. Severe or Total Loss - Virtually or legally blind. Can, at best, tell light from dark. 5. Cannot Determine.	17.

RESPONSE

Population		Sees Well	Sees Adequate	Moderate Loss	Severe Loss	Cannot Determine
Demented		14.6	46.2	25.2	6.6	7.5
Severity:	None	52.4	32.9	9.8	4.9	-
	Low	22.5	54.8	16.9	4.3	1.5
	Middle	9.6	50.6	29.1	5.0	5.7
	High	3.0	33.9	33.7	11.4	18.0
Non-Demented		31.9	46.6	13.1	5.7	2.7

Comments: Demented patients have greater problems with vision. Problems increase as severity of dementia goes up.

TABLE 9
HEARING

18. **HEARING** – ABILITY TO HEAR, WITH HEARING AID IF **REGULARLY WORN**	1. Hears Adequately in most situations, including groups. Does not require speaker to raise voice in groups or one-to-one. 2. Hears Adequately in one-to-one situations but has trouble hearing in groups 3. Moderate Loss – Hears adequately only in special situations, such as face to face with firm, clear volume. 4. Severe or Total Loss – Hears with difficulty even in special situations (may fail to respond) or is totally deaf. 5. Cannot Determine.	18. ☐

RESPONSE

Population		Hears Adequately	Hears One to One	Moderate Loss	Severe Loss	Cannot Determine
Demented		35.3	34.0	19.0	5.5	6.2
Severity:	None	67.1	19.5	11.0	2.4	-
	Low	41.8	35.7	16.7	5.0	.9
	Middle	34.1	37.8	20.1	4.4	3.7
	High	22.5	30.9	22.0	8.1	16.5
Non-Demented		53.4	29.3	11.6	3.6	2.1

Comment: Demented patients have greater problems with hearing. Problems increase as severity of dementia goes up.

TABLE 10
EXPRESSIVE COMMUNICATION

19. **EXPRESSIVE COMMUNICATION** – GENERAL METHOD OF CONVEYING INFORMATION TO OTHERS **IN OWN LANGUAGE** (e.g. English, Spanish)	1. Speaks and is generally understood. 2. Speaks, but is understood with difficulty. 3. Uses only structured sign language, writing, or yes or no responses. 4. Uses only gestures, grunts, or primitive symbols to communicate. This includes a special cueing system developed with the patient. (e.g. aphasiac). 5. Cannot convey needs, (e.g. comatose). 6. Cannot Determine.	19. ☐

RESPONSE

Population		Speaks Understood	Speaks Difficult	Sign Language	Gestures Grunts	Cannot Convey	Cannot Determine
Demented		55.5	18.5	1.3	6.0	17.5	1.2
Severity:	None	97.6	2.4	-	-	-	-
	Low	84.6	12.3	.7	1.7	-	.7
	Middle	56.3	28.6	1.4	4.6	6.0	3.2
	Severe	11.9	18.0	2.0	13.9	54.2	-
Non-Demented		73.2	14.4	1.9	5.3	4.3	.9

Comment: Demented patients have greater problems with expressive communication. Problems increase as severity of dementia goes up.

TABLE 11
RECEPTIVE COMMUNICATION

20. **RECEPTIVE COMMUNICATION/COMPREHENSION** – GENERAL METHOD OF UNDERSTANDING INFORMATION CONVEYED BY OTHERS **IN OWN LANGUAGE** (e.g. English, Spanish)	1. Generally understands oral communication. 2. Has limited comprehension of oral communication; needs repetition or simplified explanations. 3. Depends on lip reading, written material, or structured sign language. 4. Understands only primitive gestures, facial expressions, simple pictograms, and/or recognizes environmental cues. 5. Unable to understand or no indication by patient (e.g. comatose). 6. Cannot Determine.	**20.** ☐

RESPONSE

Population	Generally Understands	Limited	Lip Reading	Primitive Gestures	Unable	Cannot Determine
Demented	33.1	42.2	.9	3.4	14.0	6.4
Severity: None	100.00	-	-	-	-	-
Low	58.4	37.9	1.3	.2	-	2.2
Middle	23.3	61.3	1.6	1.4	1.6	10.8
High	.5	34.7	-	10.1	46.8	7.9
Non-Demented	70.4	21.7	.7	1.0	3.7	2.6

Comment: Demented patients have greater problems with receptive communication. Pattern follows one observed in expressive communication.

TABLE 12
MOBILITY

27. MOBILITY – HOW THE PATIENT MOVES ABOUT	Enter: 1. **Walks** independently – Does not require supervision or human assistance. May require an assistance device (e.g., cane, crutch, walker), but does not require a wheelchair. 2. **Walks** with Minimal Supervision and/or Human Assistance – Requires intermittent verbal cueing and observation when walking. May require human assistance for difficult parts of walking, such as stairs, ramps, long distances 3. **Walks** with Continuous Supervision – Requires constant one-to-one guidance and observation with minimal physical assistance. 4. **Walks** with Continuous Human Assistance – Requires constant physical assistance/support from someone to move about. 5. **Wheels** Independently – Cannot walk, but can propel and maneuver wheelchair independently. May require human assistance for only difficult maneuvers (e.g., elevators, ramps). 6. **Is Wheeled** – May not propel or maneuver wheelchair at all or only a few feet. 7. **Chairfast** – Moved by others from bed to chair. 8. **Bedfast** – Does not get out of bed at all.	27. ☐

RESPONSE

Population		Walks Indep.	Walks Minimal	Walks Continuous	Walks Assistance	Wheels Indep.	Is Wheeled	Chairfast.	Bedfast
Demented		17.9	9.6	4.9	10.0	11.2	25.2	20.0	1.2
Severity:	None	51.2	18.3	3.7	2.4	18.3	3.7	2.4	-
	Low	31.6	17.8	5.6	8.4	15.4	13.4	7.4	.4
	Middle	10.1	6.0	6.2	13.5	12.8	29.8	20.6	1.1
	High	3.5	2.3	3.0	9.6	3.1	38.2	37.7	2.5
Non-Demented		24.5	11.6	5.7	7.4	20.1	19.3	10.7	.9

Comments: Demented patients have greater problems with mobility. As severity of dementia increases, mobility problems increase.

TABLE 13
TRANSFER

28. TRANSFER – PROCESS OF MOVING BETWEEN POSITIONS, TO AND FROM BED, CHAIR, STANDING	1. Independent – Completes necessary transfers without human supervision or assistance. May use equipment, such as railings, trapeze. 2. Minimal Supervision and/or Physical Assistance – Needs verbal cueing, physical contact guidance and/or physical assistance for difficult maneuvers only (e.g., bathroom). 3. Continous Supervision – To complete a transfer requires a person present to guide the entire transfer or to steady wheelchair. 4. Continous Human Assistance – Is transferred with physical assistance of one other person. May need lifting equipment. 5. Continous Human Assistance – Is transferred with physical assistance from two or more persons. May need lifting equipment. 6. Bedfast – Is not transferred, cannot and is not gotten out of bed.	28. ☐

RESPONSE

Population	Independent	Minimal Assistance	Continuous Supervision	Continuous Assistance	Two Assist	Bedfast
Demented	23.1	8.9	7.3	24.9	34.7	1.1
Severity: None	68.3	14.6	3.7	9.8	3.7	-
Low	43.1	13.2	8.9	17.5	16.9	.4
Middle	12.1	7.3	8.0	32.0	39.6	.9
High	2.5	4.6	5.3	28.6	56.7	2.3
Non-Demented	34.0	11.7	7.1	21.1	25.5	.6

Comment: As severity of dementia goes up, problems with transfer increase.

TABLE 14
EATING

29. EATING – PROCESS OF GETTING FOOD BY ANY MEANS FROM THE RECEPTACLE (e.g., PLATE, CUP, TUBE) INTO THE BODY	1. Independent – Generally feeds self without human supervision or physical assistance. May use adaptive equipment. 2. Minimal Supervision and/or Physical Assistance – Requires intermittent verbal encouragement or guidance and/or physical assistance with minor parts of feeding, such as cutting food, buttering bread and opening milk carton, setting up equipment. 3. Continous Supervision – Requires constant one-on-one guidance, teaching and encouragement. May occasionally need help with eating. 4. Hand Fed – Totally fed by hand. This includes syringe feeding. 5. Tube or parenteral feeding.	**29.** ☐

RESPONSE

Population	Independent	Minimal Assist.	Continuous Supervise	Hand Fed	Tube Fed
Demented	13.4	37.1	19.7	26.7	3.1
Severity: None	61.0	35.4	2.4	1.2	-
Low	25.8	56.3	11.9	5.6	.4
Middle	3.2	38.2	33.4	22.4	2.8
High	.5	13.9	17.2	61.3	7.1
Non-Demented	28.5	44.9	11.0	13.2	2.5

Comment: Demented patients have greater problems with eating which increases as severity goes up.

TABLE 15
DRESSING

30. DRESSING – PERFORMING THE NECESSARY AND ROUTINE FUNCTIONS OF DRESSING INCLUDING. GETTING, PUTTING ON, FASTENING AND TAKING OFF ALL ITEMS OF CLOTHING, BRACES, & ARTIFICIAL LIMBS **(CLOTHING IS NOT JUST A BED GOWN)**	1. Independent – Uses no human supervision or physical assistance. This includes obtaining clothes and managing buttons, socks and shoes. 2. Minimal Supervision and/or Physical Assistance – A person does **not** have to be constantly present to insure the patient dresses self. May need verbal directing and motivating for the proper arrangement and retrieval of clothing or speed in dressing, and/or putting on artificial limb. 3. Continuous Supervision – Requires a person to be present to guide, teach, and motivate patient during the entire task, (e.g., needs physical assistance with difficult parts of dressing, such as fasteners). 4. Continuous Physical Assistance – Patient participates in task, but needs constant help with major parts of dressing (e.g., putting blouse/shirt over shoulders). 5. Total Assistance – Has to be completely dressed by another person; resident does not participate. 6. Patient generally wears a bed gown (60% or more of the time).	**30.** ☐

RESPONSE

Population		Independent	Minimal Assist.	Continuous Supervise	Continuous Assist.	Total Assist.	Not Dressed
Demented		5.9	10.5	6.4	11.6	61.3	4.4
Severity:	None	37.8	35.4	11.0	9.8	6.1	-
	Low	10.2	23.6	13.6	21.7	30.3	.7
	Middle	.7	1.1	3.7	10.1	80.8	3.7
	High	-	.3	-	1.8	87.3	10.6
Non-Demented		18.4	21.0	7.0	14.8	35.2	3.7

Comment: Demented patients have greater problems with dressing which increases as severity goes up.

TABLE 16
BATHING

31. **BATHING** – PROCESS OF WASHING THE BODY PARTS, INCLUDING GETTING TO THE BATHING WATER. THIS MAY INCLUDE THE SHOWER, BATHTUB OR BED BATH	1. Independent – Requires no human supervision or support. May use special equipment and water may be drawn for the patient. 2. Minimal Supervision and/or Physical Assistance – Requires intermittent checking and observing. May require physical assistance for minor parts of the task, transferring in and out of bath and bathing back. 3. Continuous Supervision – Requires constant one-on-one observation, motivation and guidance. 4. Continuous Physical Assistance – Patient participates but requires constant help with most parts of bathing. 5. Total Assistance – Patient does not participate. Patient is bathed in bath, shower or bed by another person.	31. ☐

RESPONSE

Population	Independent	Minimal Assist.	Continuous Supervise.	Continuous Assist.	Total Assist.
Demented	.7	9.2	5.7	14.1	70.4
Severity: None	7.3	45.1	15.9	19.5	12.2
Low	.7	18.4	11.7	28.8	40.5
Middle	-	.9	2.8	9.2	87.2
High	-	-	-	1.3	98.7
Non-Demented	3.4	23.1	8.7	21.0	44.0

Comment: Demented patients have greater problems with bathing which increases as severity goes up.

TABLE 17
TOILETING

32. **TOILETING** – PROCESS OF GETTING TO AND FROM TOILET (INCLUDING BEDPAN OR URINAL), TRANSFERRING ON AND OFF TOILET, CLEANSING SELF AFTER ELIMINATION AND ADJUSTING CLOTHES	1. Independent – Can toilet self without human supervision or physical assistance. May require special equipment, such as a raised toilet or grab bars. 2. Minimal supervision and/or Physical Assistance – Requires intermittent observing and guidance for safety or encouragement reasons. May require physical assistance for minor parts of task, such as clothes adjustment and washing hands. 3. Continuous Supervision – Requires constant one-to-one guidance and teaching. 4. Continuous Physical Assistance – Patient participates but requires constant help with major parts of the task or task will not be completed (e.g., maintaining balance, transferring, wiping and cleaning). 5. Total Assistance – Patient does not participate at all; another person assists with all aspects of toileting procedures. 6. Incontinent – Taken to toilet on a regular scheduled basis. 7. Incontinent – Does not use the toilet.	32. ☐

RESPONSE

Population	Independent	Minimal Assist.	Continuous Supervise	Continuous Assist.	Total Assist.	Incontinent Toileted	Incontinent No Toilet
Demented	17.8	8.0	1.8	9.8	11.5	26.4	24.7
Severity: None	73.2	14.6	1.2	6.1	2.4	2.4	-
Low	35.5	16.0	3.0	14.9	6.9	16.0	7.6
Middle	4.8	5.0	2.3	13.0	17.9	33.9	23.1
High	-	.5	-	1.0	11.7	35.2	51.7
Non-Demented	34.2	12.6	2.1	13.1	10.0	15.5	12.6

Comment: Demented patients have greater problems with toileting. As severity goes up, the number of demented patients who are incontinent goes up greatly.

TABLE 18
BLADDER CONTROL

33. BLADDER CONTROL – ABILITY TO CONTROL BLADDER ELIMINATION UNDER NORMAL CIRCUMSTANCES	1. Continent – Full control or rarely incontinent (i.e. less than once per week). 2. Occasionally Incontinent – Lacks bladder control at **night** and/or 1-3 times per week during the **daytime**. 3. Frequently or Totally Incontinent – 4 or more times per week during the **daytime**. 4. Indwelling Catheter – Self care, no assistance needed. 5. Indwelling Catheter – Not self care, needs assistance. 6. External (or Intermittent) Catheter.	33. ☐

RESPONSE

Population	Continent	Occassional Incontinent	Totally Incontinent	Catheter Self Care	Catheter Assist.	External Catheter
Demented	24.1	10.1	57.9	.2	6.6	1.0
Severity: None	82.9	12.2	4.9	-	-	-
Low	46.8	16.7	32.3	-	2.8	1.5
Middle	10.1	9.6	73.9	.2	5.5	.7
High	1.0	2.5	81.3	.5	13.7	1.0
Non-Demented	50.2	10.6	29.4	.3	7.2	2.3

Comment: Bladder incontinence is a greater problem in the demented.

TABLE 19
BOWEL CONTROL

34. BOWEL CONTROL – ABILITY TO CONTROL BOWEL ELIMINATION UNDER NORMAL CIRCUMSTANCES	1. Continent – Full control or rarely incontinent (i.e. less than once per week). 2. Occasionally Incontinent – One time or less per week loses control. Is generally aware of the urge to move bowels and maintain control. 3. Frequently or Totally Incontinent – Two or more times per week loses control. Is generally unaware of urge to move bowels. 4. Ostomy – Self care, no assistance needed. 5. Ostomy – Not self care, assistance needed.	34. ☐

RESPONSE

Population		Continent	Occassional Incontinent	Totally Incontinent	Ostomy Self-Care	Ostomy Assist.
Demented		29.9	11.9	57.3	.2	.9
Severity:	None	90.2	3.7	2.4	1.2	2.4
	Low	58.0	13.4	27.7	.2	.7
	Middle	14.0	18.3	67.1	-	.7
	High	2.0	4.6	92.4	-	1.0
Non-Demented		58.5	11.0	28.7	.2	.9

Comment: Bowel incontinence is greater in the demented patient and increases as severity goes up.

TABLE 20
PERSONAL HYGIENE

35. PERSONAL HYGIENE – PROCESS OF GROOMING, INCLUDING COMBING HAIR, WASHING FACE, SHAVING AND BRUSHING TEETH	1. Independent – Generally responsible for and receives no human supervision or assistance with personal grooming. 2. Minimal Supervision and/or Physical Assistance – Requires intermittent verbal cueing or observation; and/or requires human assistance with difficult parts of grooming. 3. Requires constant one-on-one observation, guidance and encouragement with all or most of personal grooming. 4. Continous Human Assistance – Participates in personal grooming but needs constant physical assistance to complete grooming adequately or at all. 5. Total Assistance – Does not participate; another person performs all or most aspects of personal hygiene.	35. ☐

RESPONSE

Population		Independent	Minimal Assist.	One on One	Continuous Assist.	Total Assist.
Demented		3.7	12.4	6.8	12.3	64.8
Severity:	None	28.1	53.7	6.1	8.5	3.7
	Low	5.8	26.0	15.6	23.6	29.0
	Middle	.2	1.4	3.7	11.7	82.8
	High	-	-	-	.5	99.5
Non-Demented		18.3	24.2	6.6	15.7	35.2

Comment: High levels of personal hygiene assistance are required by the demented.

TABLE 21
WANDERING

38. WANDERING – UNSAFE OR DISRUPTIVE ROAMING OR STRAYING WITHIN UNIT, FROM UNIT, OR INAPPROPRIATELY OUTSIDE OF FACILITY	1. Does not wander. 2. Wanders with no clear direction in usual environment. May wander into another resident's room. 3. Unless supervised or restrained, wanders throughout the facility. Can find way back. 4. Takes every opportunity to wander away from unit. Cannot find way back. 5. Unless supervised or restrained, wanders outside the facilaity with no clear direction.	38. ☐

	RESPONSE				
Population	None	On Floor	In Facility	Disappears	Outside Facility
Demented	83.8	10.8	1.5	2.6	1.2
Severity: None	95.1	3.7	-	-	1.2
Low	83.3	11.3	2.4	1.7	1.3
Middle	77.2	14.8	1.8	4.8	1.4
High	89.1	7.6	.5	1.8	1.0
Non-Demented	95.2	3.3	.8	.5	.3

Comment:

TABLE 22
VERBAL ABUSE

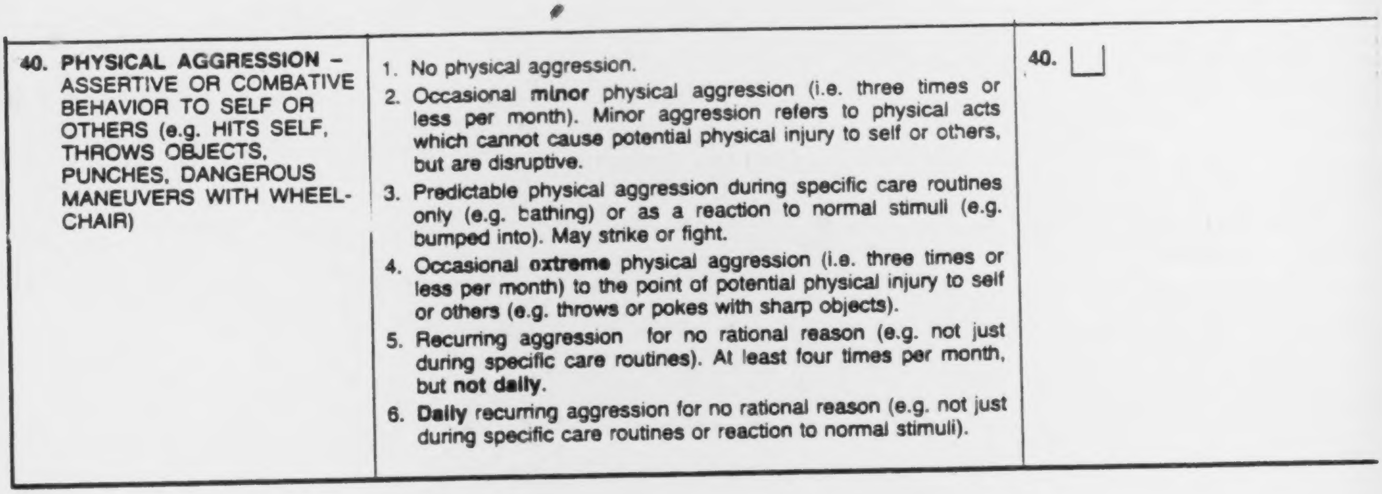
39. VERBAL ABUSE OR INAPPROPRIATE OUTBURSTS CAUSING DISRUPTION – MUTTERS, SWEARS, THREATS, BAITS, YELLING	1. No verbal abuse or disruption. 2. Occasional verbal abuse or disruption (i.e. three times or less per month). 3. Predictable verbal disruption during specific care routines only (e.g. bathing). Four or more times per month. 4. Short-lived verbal disruption during the day and/or night for no appropriate reason (e.g. not just during care routines). Four or more times per month. 5. Recurring verbal disruption during the day and/or night for no appropriate reason. At least four times per month, but **not daily**. 6. **Daily** recurring verbal disruption during the day and/or night for no appropriate reason.	39. ☐

RESPONSE

Population		None	Occassional	Predictable	Short Lived	Recurring	Daily
Demented		57.3	10.8	12.7	4.5	5.8	8.9
Severity:	None	75.6	12.2	6.1	-	3.7	2.4
	Low	52.9	14.6	14.2	5.7	5.2	7.4
	Middle	50.4	11.4	14.2	5.6	7.0	11.6
	High	66.0	5.6	10.7	3.1	5.6	9.1
Non-Demented		73.4	10.7	6.8	3.1	2.9	3.1

Comment: Verbal abuse is a greater problem among the demented than the non-demented.

TABLE 23
PHYSICAL AGGRESSION



40. PHYSICAL AGGRESSION – ASSERTIVE OR COMBATIVE BEHAVIOR TO SELF OR OTHERS (e.g. HITS SELF, THROWS OBJECTS, PUNCHES, DANGEROUS MANEUVERS WITH WHEEL-CHAIR)	1. No physical aggression. 2. Occasional **minor** physical aggression (i.e. three times or less per month). Minor aggression refers to physical acts which cannot cause potential physical injury to self or others, but are disruptive. 3. Predictable physical aggression during specific care routines only (e.g. bathing) or as a reaction to normal stimuli (e.g. bumped into). May strike or fight. 4. Occasional **extreme** physical aggression (i.e. three times or less per month) to the point of potential physical injury to self or others (e.g. throws or pokes with sharp objects). 5. Recurring aggression for no rational reason (e.g. not just during specific care routines). At least four times per month, but **not daily**. 6. **Daily** recurring aggression for no rational reason (e.g. not just during specific care routines or reaction to normal stimuli).	40. ☐

RESPONSE

Population		None	Minor	Predictable	Occassional	Recurring	Daily
Demented		67.6	9.2	15.1	1.5	4.1	2.6
Severity:	None	96.3	2.4	1.2	-	-	-
	Low	71.6	9.6	10.9	2.6	3.5	1.8
	Middle	60.6	10.4	18.8	1.6	5.3	3.3
	High	64.6	8.6	18.7	.5	4.3	3.3
Non-Demented		86.7	5.2	5.4	.8	1.4	.5

Comment: Physical Agression is a greater problem among the demented than the non-demented.

TABLE 24
REGRESSIVE OR INAPPROPRIATE BEHAVIOR

42. **REGRESSIVE OR INAPPROPRIATE BEHAVIOR** — REPETITIVE BEHAVIOR OUT OF CONTEXT OR ANTI-SOCIAL BEHAVIOR	1. Does not exhibit regressive or inappropriate behavior. 2. Exhibits nondisruptive regressive behavior, such as rocking. 3. Occasionally (i.e., three times or less per month) exhibits inappropriate behavior - e.g., smears feces, throws food, makes sexual advances. 4. Frequently (i.e., four times or more per month, not daily) exhibits disruptive and inappropriate behavior, such as frequently dressing and undressing self, smearing feces, throwing food, stealing, sexually displaying oneself to others. 5. Daily exhibits disruptive and inappropriate behavior.	42. ☐

RESPONSE

Population		None	Non-disruptive	Occassional	Frequent	Daily
Demented		50.6	23.0	7.1	9.0	10.4
Severity:	None	91.5	4.9	-	2.4	1.2
	Low	60.1	17.8	6.5	9.1	6.5
	Middle	41.8	27.5	8.6	9.9	12.2
	High	40.8	27.9	7.6	9.1	14.7
Non-Demented		75.9	13.5	4.7	3.2	2.7

Comment: Regressive behavior is a greater problem among the demented than the non-demented.

Term Care Case Mix Reimbursement Project Staff, New York State Department of Health, December 1985).

The RUG-II Classification consists of 16 distinct patient groups. The 16 groups are distinguished by a selected set of medical conditions, several diagnoses are among them, and a composite score measuring the ADL ability of patients. Not all characteristics of a patient are used in the classification system. Rather, the classification relies on Key indicators which were important in explaining the cost of care of patients.

Indicators imply other conditions relating to the patient which is not explicity considered in the classification. ADLs provide a good example to clarify how indicators implicitly account for other patient characteristics. During analysis, all ADLs were found to be related to the cost of caring for patients. Additionally, ADLs were found to be very much related to each other. Patients with low functioning in several ADLs almost always had low functioning in the remaining ADLs and further, once three ADLs are used to describe a patient and predict cost, addition of a fourth did not increase the accuracy of estimating the cost of caring for the patient. Using three ADLs implicitly accounts for the other ADLs. In addition, the three ADLs can be measured collectively through use of an ADL Index. In the RUG-II system, the ADL Index is composed of three ADL variables; eating, toileting and transfer. The Index is the sum of numerical values assigned to patient descriptor categories for the three ADLs and has values from 3 to 10 with 3 representing none or minimal impairment in all three ADLs.

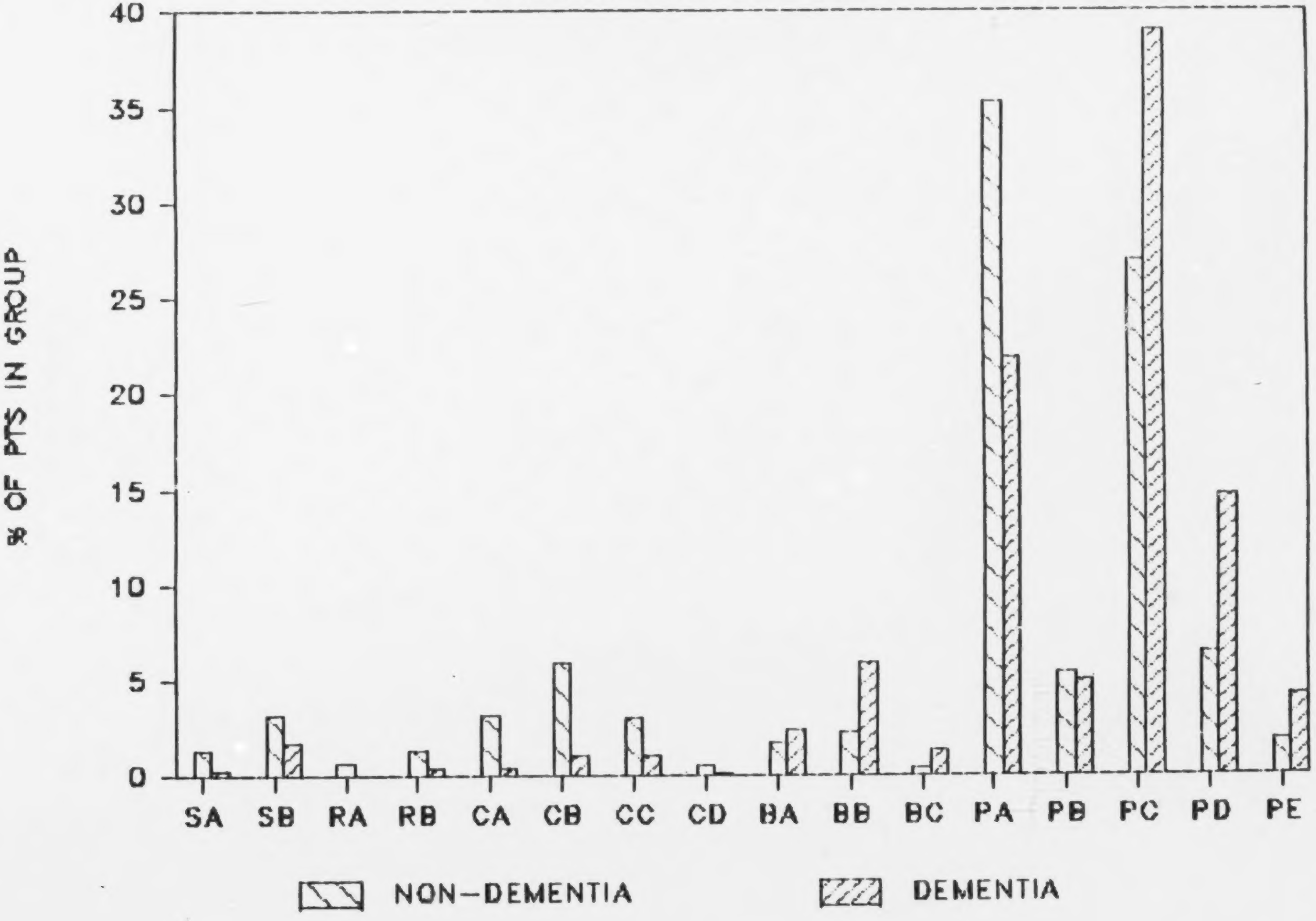
Dementia is not an explicit indicator variable in RUG-II. Despite

TABLE 25
CORRELATION BETWEEN DEMENTIA SCORE AND ADL INDEX NUMBERS IN TABLE ARE PERCENT OF TOW PATIENTS WITH MEDICAL CONDITION OF DEMENTIA

	ADL INDEX							
Dementia Score	3	4	5	6	7	8	9	10
0	81.7	4.9	7.3	3.7	2.4	-	-	-
1	66.7	13.5	10.4	6.3	2.1	1.0	-	-
2	55.7	6.5	16.9	13.7	4.8	1.6	.8	-
3	34.6	9.4	22.4	17.8	9.4	5.6	.9	-
4	38.8	8.8	15.0	15.0	7.5	11.3	3.8	-
5	25.5	5.5	12.7	12.7	23.6	12.7	7.3	-
6	20.8	6.3	20.8	12.5	20.8	12.5	4.2	2.1
7	13.3	3.3	28.3	23.3	16.7	11.7	3.3	-
8	6.4	12.8	14.1	16.7	21.8	18.0	10.3	-
9	9.4	7.1	17.7	20.0	18.8	12.9	14.1	-
10	3.6	1.8	11.5	24.7	24.7	25.3	7.2	1.2
11	1.7	2.5	10.7	18.2	24.0	32.2	9.9	.8
12	-	1.6	4.7	6.3	21.9	45.3	20.3	-
13	-	2.0	10.2	12.2	10.2	53.1	12.2	-
14	-	3.5	3.5	6.9	6.9	58.6	20.7	-
15	-	-	1.5	9.1	16.7	52.3	18.9	1.5

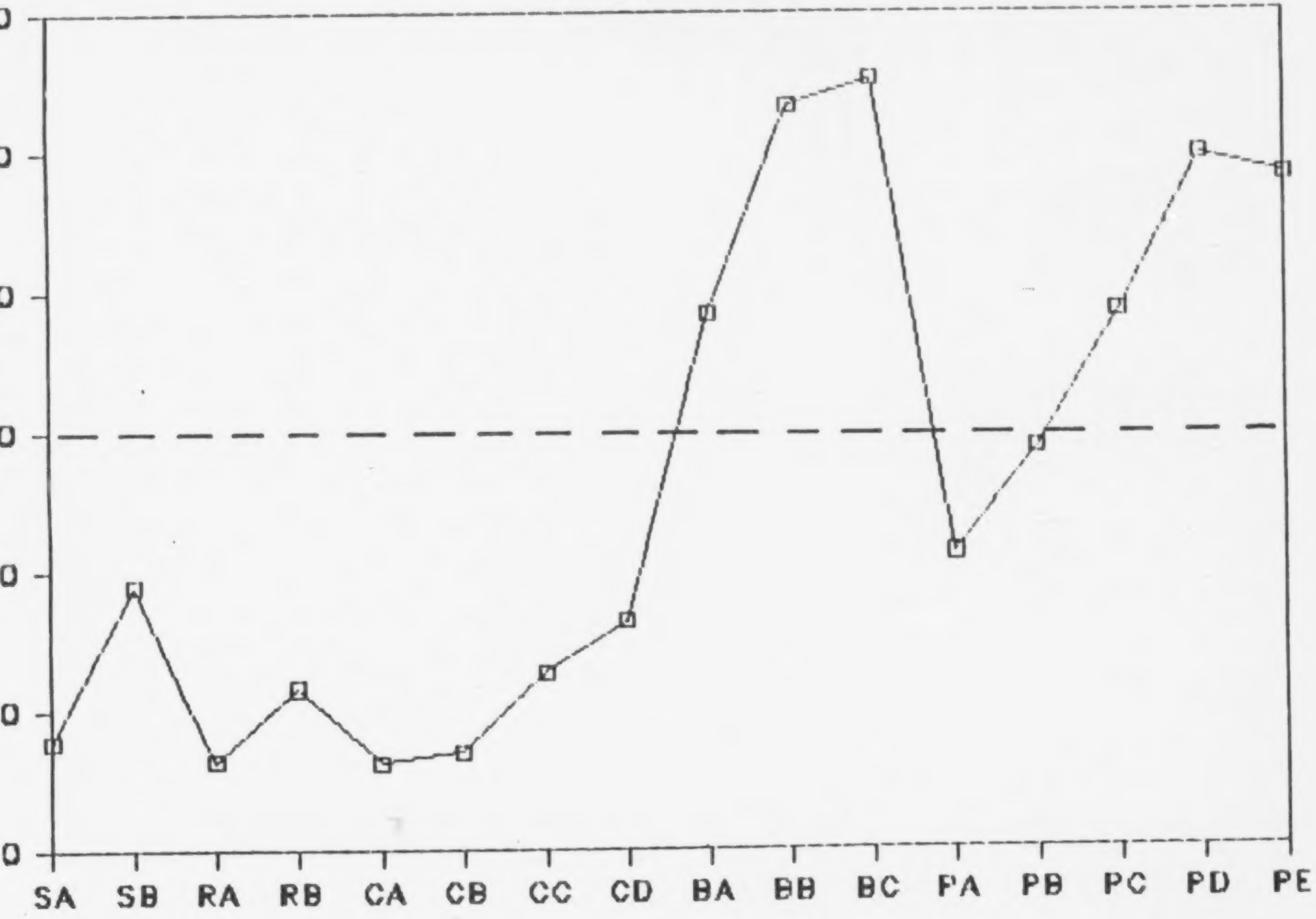
DISTRIBUTION OF PATIENTS IN RUG GROUPS

NON-DEMENTIA VS DEMENTIA PTS



DISTRIBUTION OF DEMENTIA PATIENTS

% PER GROUP



this, when patients in New York nursing homes are partitioned into Demented-Non-Demented groups using the medical condition (diagnosis) definition of dementia and then classified into RUG-II groups, the average case mix intensity of demented patients using the RUG-II case mix weights was found to be 5.6 percent higher than non-demented patients. Dementia patients are more frequently found in higher disability groups as measured by the ADL Index. In the tables in part 2 of this paper, this general tendering was observed. ADL Index appears to be functioning as an indicator for the severity of the dementia.

In Table 25, the relationship between the dementia severity score and the ADL Index is presented. As the dementia severity score increases, so does the ADL Index. When the severity score is low, ADL Index is very skewed to low levels. When the severity score is high, the skew for ADL Index is also high. In the middle values of severity score, ADL Index is not skewed but rather is spread out over all levels of the Index.

The distribution of dementia patients among RUG-II categories for all patients in New York State nursing homes in March-June 1985 is presented in Figures 1 and 2.

SUMMARY

A combined medical condition - dementia severity score classification for nursing home patients with dementia was developed and presented. This classification was needed because diagnosis alone was not adequate to segregate and describe the demented nursing home resident.

A high correlation between severity of dementia and ADLs was found. The RUG-II classification was found to group demented patients into higher resource use groups than non-demented patients and analysis between the RUG-II ADL Index and the dementia severity score showed strong correlation between the two measures.

AN OVERVIEW OF THE NEW YORK STATE
LONG TERM CARE RUG-II CASE MIX REIMBURSEMENT SYSTEM[*]

PREPARED BY

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DECEMBER 1985

[*] This overview has been prepared by the case mix reimbursement staff to provide a concise explanation of the reimbursement system and the RUG-II case mix measurement system. It should not be viewed as a detailed, definitive coverage of the regulations relating to this system. For such coverage the reader is referred to section 86-2 of Part 86, Title 10 N.Y.C.R.R. In addition, the project staff has published a series of technical reports which provide more extensive discussion of the development and rationale of the design of the system.

[**] This project has been supported under a grant from the Health Care Financing Administration, DHHS (Grant 11-C-98325/2-03, Project Officer: Elizabeth Cornelius) with additional support provided by the NYS Department of Health. The project has been carried out by the NYS Department of Health (executive direction provided by Steven Anderman, Principal Investigator and Deputy Director, Division of Health Care Financing, and William Gormley, Assistant Director, Division of Health Care Financing) and Rensselaer Polytechnic Institute School of Management.

Efficiency Incentives

The new system provides means by which not only individual facilities are encouraged to operate efficiently, but also offers the potential of more efficient use of the available long term care resources. As facilities are encouraged to accept heavier care patients, those lighter care patients who could more appropriately be served in community-based care will be more frequently served in those settings.

Address Arbitrary Levels Of Care

A case mix reimbursement system provides a powerful tool to address the problems associated with appropriate placement, level of care and utilization review issues. Incentives to place patients in more restrictive environments than necessary are eliminated because the reimbursement system provides the same payment level for direct nursing care regardless of level of care setting. Through the use of patient-specific payment rates, a more precise means to direct appropriate resources to individual patients is available, reversing the previous limitations of a dual rate (SNF and HRF/ICF) system.

Incentives for Rehabilitation and Discharge:

Through recognizing the appropriate resources required to provide more intense rehabilitation to patients with a potential for discharge, the reimbursement methodology offers a strong incentive to encourage the provision of such care. This can result in a more active intervention for patients requiring such care and an increased turnover rate.

Potential Quality of Care Implications:

Under a case mix payment system, there is also the potential for a negative incentive to allow patients to become more debilitated in order to maximize revenue. The danger is that a patient in poor condition will generally lead to a higher reimbursement rate than a patient in good condition. Further, providing inadequate care for a patient is less expensive than providing necessary care and could lead to deterioration of the patient.

Recognizing this potential, the features of the RUG-II payment system were carefully designed to minimize the negative quality incentives. However, it also is essential to assure that the quality assurance function is operating in a most effective manner. The RUG-II system provides an extensive new data base and thus provides the opportunity to develop effective means to link the quality assurance and reimbursement systems. Through such integration, the effectiveness of the quality assurance system can be significantly strengthened, while providing a more efficient approach to patient review.

Analytical Process

The derivation process incorporated both clinical and statistical criteria in order to yield a system that was both statistically sound and clinically meaningful. The patient characteristics and corresponding staff time data were analyzed primarily through the use of AUTOGRP, the interactive statistical clustering analysis software used in the development of Diagnostic Related Groupings (DRGs). A Technical Review Panel, composed of clinicians, statisticians, long term care administrators and consultants, was established to review results and offer guidance with a clinical perspective at key decision points.

Issues involved in the derivation of the RUG-II groups, in addition to clinical and statistical validity, included the following:

- The system should provide the framework for a data base which is useful in a variety of contexts and purposes for regulation, management, and analysis of the long term care system.
- Residents grouped together should be similar in resource utilization.
- There should be an administratively feasible number of groups.
- The system should be understandable and easy to use.
- The system should be difficult for facilities to manipulate for higher reimbursement rates.
- The system should be flexible and easily refined.

III.2 Description of the RUG-II Classification System

The RUG-II classification system is composed of 16 distinct patient groups which are each different in terms of clinical characteristics and statistically different in terms of resource utilization.

The system which was developed integrates two basic approaches: the use of a hierarchy of patient types and secondary subgroups formed based on ADL function levels. The five hierarchical groups are as follows:

Special Care
Rehabilitation
Clinically Complex
Severe Behavioral Problems
Reduced Physical Functions

Each of the above clinical groups is further divided by the ADL Index score into subgroups, distinguished by level of physical functioning. The ADL Index is composed of three ADL variables: eating, toileting and transfer. These three ADLs were chosen for the following reasons: They were found, through the use of cluster analysis and regression analysis to be as statistically accurate in estimating resource consumption as any

- **SEVERE BEHAVIORAL PROBLEM**. This group is characterized by high frequency and severe level of one or more of the following behavioral problems: physical aggression, regression, verbal abuse, or hallucinations.

SUBGROUP:	ADL INDEX:
Behavioral A	3
Behavioral B	4-7
Behavioral C	8-9

- **REDUCED PHYSICAL FUNCTIONING**. This group includes all residents that do not qualify in the above four hierarchy groups. This group is characterized by reduced levels of Activity of Daily Living functioning.

SUBGROUP:	ADL INDEX:
Physical A	3
Physical B	4
Physical C	5-7
Physical D	8
Physical E	9

IV. HIGHLIGHTS OF THE CASE MIX REIMBURSEMENT METHODOLOGY

The New York State Prospective Case Mix Methodology to be implemented January 1, 1986 introduces several innovative elements into the Medicaid reimbursement approach for nursing homes. The following provides an overview of the primary elements:

IV.1 Overview of the Reimbursement Methodology

The case-mix reimbursement system has the following primary system features:

RUG-II Patient Classification System:

In order to establish relative reimbursement rates for different types of long term care patients, a classification system which discriminates the relative costs to provide care for long term care patients was developed and integrated into a reimbursement system design.

Patient-Specific Payment Rates:

The direct component of the rate paid to facilities is based on the relative care needs of the patients in that facility. Statewide average prices for each of 16 RUG-II categories were

Budget Neutrality

The implementation of the case mix reimbursement system is designed to be budget neutral. Budget neutral means that the total amount of Medicaid funds paid as of January 1, 1986 is equal to what would have been anticipated to be paid under the previous methodology plus an inflation factor. Because the rates are based on relative care needs of patients, and it is assumed that a larger number of heavier care need patients will be admitted to nursing homes (largely from the hospital backlog for nursing home placement), the total payments to nursing homes may increase somewhat more rapidly over the next several years than would have been expected under the previous methodology.

IV.2 Description of the Method for Setting Rates

Base Year:

The calculation of the 1986 facility-specific rates is based on the reported costs from the 1983 RHCF-4 and RHCF-2 Cost Reports. These payment rates are trended to equivalent 1986 figures based on an appropriate trend factor which reflects increases in costs for this period.

Components of the Rate:

The per diem payment rate for Medicaid patients includes four major components: direct care, indirect costs, non-comparable costs, and capital reimbursement. The specific elements of each cost center are as follows:

1. DIRECT - Nursing Administration, Activities, Social Services, Transportation, Physical Therapy, Occupational Therapy, Speech Therapy, Pharmacy, Central Service Supply, and Direct Nursing (SNF or HRF).

2. INDIRECT - Fiscal, Administration, Plant Operation and Maintenance (except utilities, real estate and occupancy taxes), Grounds, Security, Laundry & Linen, Housekeeping, Patient Food Service, Cafeteria, Non-Physician Education, Medical Education, Housing, and Medical Records.

3. NONCOMPARABLES - Laboratory Services, ECG, EEG, Radiology, Inhalation Therapy, Podiatry, Dental, Psychiatric, Hearing Therapy, Medical Director's Office, Medical Staff Services, Utilization Review, Other Ancillaries, and Plant Operation & Maintenance costs incurred for utilities and real estate and occupancy taxes.

4. CAPITAL - This is reimbursable property depreciation, interest and equity. There is no change to this component from the previous methodology.

5

Total Rate

The component parts of the rate calculated above are summed to compute a single average reimbursement per diem. The reimbursable direct, indirect, noncomparable components, and the transfer fund amount are summed and then trended by a three year inflation factor. This inflated per diem is then added to the calculated reimbursable capital component and miscellaneous per diem adjustments to compute the RHCFs Medicaid Reimbursement Rate for 1986.

IV.3 Additional Elements of the Methodology

Discrete Ceilings - Discrete ceilings are used to limit the maximum allowable salaries paid for the facility Administrator, Owner, Operator and Relatives of the Owner/Operator.

Transfer Fund - To ease the financial impact for facilities with costs that exceed the ceiling, and thus would have had a rate reduction, a temporary fund was established. The fund will transfer 10 million dollars in 1986 and 5 million dollars in 1987 from facilities which experienced higher gains under the system to the facilities incurring financial losses. In 1986, profits in excess of 13.57% are used to generate the 10 million dollars to be shared by the facilities incurring losses. To be eligible for receipt of a portion of the transfer fund, facilities must incur both a loss on the indirect side, and a net loss on both direct and indirect components of the rate. The extent of funds received is based on the ratio of the RHCFs' losses to the total statewide dollar losses.

Pricing of Reduced Physical Functioning A Patients - One of the goals of this methodology is to discourage the utilization of SNF beds by patients who do not require this type of more intensive nursing care. Patients in the Physical A category are the most independent of all the patients. They are either independent in functioning or require only minimal supervision in ADL's, and thus have the lowest reimbursement rate. To provide a financial incentive to place these patients in lower care facilites, the price established for these patients is based only on the costs of care required in an HRF (which are lower than SNF costs). This price will be paid for Physical A patients in HRFs and any such patients admitted to SNFs after January 1, 1986.

Input Price Adjustments - The input price adjustment process is used in order to neutralize the influence of differences in labor costs when facil~~ities~~ costs are compared to each other. A change included in this methodology is that the Input Price Adjustment Factor is calculated on a regional basis rather than a facility specific basis. Because some facilities were impacted by this change, a temporary provision of the methodology allows, in certain circumstances, the use of a facility-specific adjustment factor during 1986. For those facilities affected, the facility-specific factor is phased to a regional factor over four years.

determines that an inaccuracy exists in their previously reported data, corrections are to be made and submitted on the Data Modification Form.

2. An Error Report: This report lists any technical errors which were identified in the data, such as missing numbers or incorrect numbers. These errors are to be corrected by the facility and resubmitted within five days of receipt.

Following submission of data corrections, the facility audit process begins.

The Audit Process:

The purpose of the on-site audit is to assure that facilities are submitting accurate data which reflects actual patient conditions. Because the data is utilized to establish the reimbursement rate, the accuracy of the data becomes of particular importance. In essence, each facility is granted delegated status to complete their own assessments. If, however, the facility is found out of compliance with accuracy standards, the facility is deemed ineligible for this function, and the assessment process is to be completed by an outside party at the expense of the facility. Such expenses are not reimbursed under the Medicaid program.

The auditors have been trained in completion of the PRI as well as the completion of audit functions. While on-site, their assessment process includes the same activities used by the facility assessors' in order to accurately judge the patient's condition. In addition to the use of patient records for all assessments, the auditors also utilize discussions with staff and patient interview/observations.

The audit process is completed in several stages in order to assure data accuracy and maximize efficiency. A screening process is utilized whereby a focused sample of patients is selected, and particular characteristics of each of these patients reviewed. The specific nature of the audit is as follows:

- Stage I. The initial stage of the audit represents an independent assessment of the patient characteristics. The purpose is to determine whether there is a significant level of discrepancies between the facility and the auditor. Forty patients are specifically selected for review utilizing a computerized selection process. The auditor is responsible for evaluating specific characteristics of the patients which were reported by the facility. For example, an individual patient may be reviewed to determine if the documentation supports the reported occurrence of daily oxygen therapy. In addition, a subset of patients are reviewed to determine their ADL capacity. It is important to note that during this review, the auditor is not aware of how the facility assessed the patient's ADL ability. Following completion of the audit, the assessment of the nursing homes) to work with the Case Mix Staff in analyzing the data.

The goal of the analysis was to find those patient characteristics that best estimated the cost of caring for patients. We chose not to use a task/service list approach to the analysis for many reasons, not the least important being that the list would have to be very long which would lead to a very lengthy, and difficult to complete and audit PRI.

The purpose of the indicators is to develop classes of patients with similar care needs. The indicators that turned out to be very important in explaining the cost of care included ADLs, and conditions such as comatose, stage IV decubitus ulcer, etc. These indicators imply other conditions relating to the patient. ADLs provide a good example to clarify how the indicators implicitly account for other patient characteristics not included on the PRI. We found that all ADLs (eating, transferring, toileting, mobility, dressing, bathing, and personal hygiene) related to the cost of caring for patients. However, we also found that the ADLs were very much related to each other. Patients who had low functioning in several ADLs almost always had low functioning in the remaining ADLs. Thus, in the analysis, we found that once we used three ADLs in describing the patient, adding a fourth ADL did not increase the accuracy of estimating the cost of caring for the patient. In other words, using the three ADLs implicitly accounts for the other ADLs. Thus, while bathing a patient is not listed on the PRI, the heavier care involved in bathing a debilitated patient is accounted for by the three ADLs used in the RUG-II system.

The RUG-II analysis was concluded when neither the Case Mix staff or the clinical panel could find additional patient characteristics (or combinations of characteristics) that would improve the accuracy of estimating the cost of caring for patients.

Q: Why does the PRI and the RUG-II system only relate to nursing, PT and OT?

A: The RUG-II system uses a "key indicator" concept (discussed in an earlier question). This concept means that the RUG-II criteria were based on measuring a patient's care needs. The system was not derived as a task/service oriented system (a task/service oriented system would list the tasks/services done by staff and measure cost on the basis of checking off which tasks or services were given to a patient). Thus, in effect, no profession is represented on the PRI: instead it is the patient's care needs that are being measured. The care needs of the patient extends to all areas (nursing, PT, OT, Speech, Activities, etc.) and are implicitly measured by the factors listed on the PRI.

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Q: How will the RUG-II system classify AIDS patients?

A: When the data collection was performed in 1984, no AIDS patients were included in the sample. However, the RUG-II system basically is not a diagnostically based system (with few exceptions). Basically functional measures and other patient conditions are used to indicate the care needs of patients. There is no a priori reason to assume that the diagnosis of AIDS, rather that the factors already included on the PRI, would be more accurate in indicating the of the cost of care of AIDS patients. In general, the RUG-II system uses only a few diagnoses because the thousands of other diagnoses were not found to be indicators of the cost of caring for patients in nursing homes. If an AIDS patient is classifiable as terminal care (see the PRI Instructions for details), the patient would be classified in the Clinically Complex groups.

VI.2 Reimbursement

Q: Is there really an incentive to rehabilitate patients since a patient with better functioning leads to a RUG-II group with lower payment?

A: The RUG-II system was designed to assist nursing homes in carrying out one of their primary objectives: to ensure that patients are rehabilitated or maintained at their best level of functioning. Specifically, the following four features of the RUG-II system relate to this question:

- Rehabilitation categories. The two rehabilitation groups, Rehab A and Rehab B both recognize the high cost of providing intensive rehabilitation therapy. If you compare patients with the same ADL level, these two groups have the highest case mix indices in the RUG-II system. These two groups were constructed for patients that are receiving rehabilitation services at least five times per week with a goal of restoration of functioning.
- Direct-care-inclusive rate. The direct care component of the payment rate includes costs for all direct care services (nursing, PT, OT, Speech, Activities, Pharmacy, etc., with the exception of non-comparable costs such as laboratory and x-ray which are part of the non-comparable component of the rate). In other words, the cost of maintenance rehabilitation services are built into each RUG-II category.
- Cost neutral. Each RUG-II category is, on the average, cost neutral (see also question regarding Physical A group). In other words, if a patient improves in functional status, after six months when the patient is reassessed, the payment rate decreases because the cost of caring for the patient decreases. Thus, if a patient's functional status improves, the RUG-II payment

Q: Should the staff hours shown on the rate sheet calculations be used to determine a nursing home's staffing needs? Is the rate calculated based on those staffing "standards"?

A: No. The staff hours figures shown on the rate sheet were used only in the calculation of the input price adjustment (regional salary and fringe benefit adjustment). These figures were used to calculate the appropriate ratio of RNs, LPNs and Aide/Orderlies, not the volume of staff. The levels of staffing shown on the rate sheet do not enter into any other aspects of the rate calculation.

What the staffing levels actually represent and what they were used for is more complex to explain. The staffing levels shown represent the mean hours of RN, LPN, and aide time for each RUG-II category as collected in the 52 nursing homes that took part in the first phase of the study in 1984. The 52 facility's involved in that study had, on the average, higher nurse staffing than the average NYS nursing home. The figures shown represent all time (direct care and nursing unit time, e.g., charting, meetings, supervision) spent by nursing staff at nursing units. It includes day, evening and night shifts. It does not include absenteeism, vacations, holidays, or nursing supervisors that are not based at nursing units (or nurses that do not provide direct patient care).

These staffing figures should not be taken as staffing standards for a nursing home. This is not to say they are completely irrelevant for staffing analysis, but if they are used, they should only be used as a relative measure of staffing. As an example, assume that when you compare your nurse staffing levels to the published figures (by applying the number of patients in each RUG-II category to the staffing levels and adding across all RUG-II categories) your staffing level is 90% of the published figures. This doesn't necessarily mean the facility is understaffed or overstaffed. What it does mean is that in comparison to the data collected in the 52 selected facilities (recognizing which types of nurses were included in the data collection), your facility has a 10% lower staffing level when case mix is accounted for. Whether the staffing should be increased is a decision for the administrative and clinical staff to make on the basis of quality of care considerations. Continuing with the example, assume the facility increases its case mix by 10% by admitting higher care patients. In general, management might find that recalculating the staffing levels based on the new numbers of patients by RUG-II category, could give some indication of the relative amounts of additional staff needed to care for the higher care patients. The actual decision regarding staffing decisions also should account for whether the original staffing levels in the facility were "lean" or "generous".

Q: What will be the impact of the phase in of the payment system over the years 1986 - 1988?

details that may affect your facilities particular outcome as compared to the general rule of proportionality: (1) the transfer of some funds in 1986 and 1987 from facilities with high gains to facilities with projected decreases (when compared to the 1983 cost base plus trend factors) may mean the decrease or increase isn't precisely proportional; and (2) the multiyear phase-in of the input price adjustor and the corridors, may affect the facility's rate.

Q: Will the case mix indices be changed or will prices be recalibrated?

A: As noted in another question, we do not currently anticipate revising the case mix indices during the next three years. Recalibration refers to resetting the prices that correspond to the case mix indices. Any recalibration would have to be approved by the State Hospital Review and Planning Council. In general, recalibration should be pursued if the case mix index in the State increases due to paper compliance reasons (e.g., additional documentation allowing patients to be classified in higher groups, improved facility understanding of the case mix classification rules). Recalibration should not be pursued if case mix rises due to admittance of new, high care patients. In general, we expect both phenomena to occur. If so, recalibration would have to carefully differentiate between the former (which would affect the recalibration) and the latter (which would be excluded from the recalibration).

Q: Why does the case mix index for a facility include private pay and Medicare patients?

A: Many private pay patients eventually become Medicaid patients. Thus it was the opinion of the Statewide Advisory Committee (representatives from the Associations who advise the case mix project staff) that the fairest representation of case mix in a facility would be one which includes private pay patients (in addition the statewide average case mix index for private pay and Medicaid patients is roughly equal). This also provides an incentive to take higher care private pay patients and Medicare since doing so increases the facility's case mix index. In general, Medicare patients were found to have a higher case mix index than Medicaid or private pay. Thus including Medicare patients tends to increase a facility's case mix index and thus their rates. This feature was included as a specific incentive to encourage facilities to accept more Medicare patients.

Q: Can you summarize the incentives in the RUG-II payment system in comparison to the 1985 payment system?

A: The discussion of incentives listed below uses as its framework a comparison of the 1985 payment system as compared to

Eighty percent of the patients in HRFs fall into this category. Because they are so independent, their appropriate setting should probably be an HRF. To encourage their placement in HRFs, the price established for patients in this group is based on the average cost of providing care in an HRF. (For all other groups, the price is based on the average costs in both and HRF and SNF) Physical A patients admitted to SNFs after January 1, 1986 will be paid at this somewhat lower, HRF based, rate. However, all patients residing in the SNF prior to January 1, 1986 will receive a rate based on the average cost using both SNF and HRF costs (i.e., "grandfather clause" for current patients). If the patient is in a category other than Physical A, and is a resident prior to January 1, 1986, and has functioning restored such that they then become a Physical A, the "grandfather" rate will apply.

VI.3 PRI, Data Collection, and Audit

Q: How much are the procedures for the PRI and audit likely to change in the next year? Will the case mix index be revised?

A: There are several planned changes to the PRI and audit process which are discussed below. Of course, it is always possible that unforeseen problems may occur which require other changes in the process, but currently we are only planning the changes noted below. We do not currently plan to revise the case mix indices during the next three years (again with the caveat that unforeseen problems could occur). Changes in the case mix indices would require approval by the State Hospital Review and Planning Council since they are currently written into regulations. Also refer to the question regarding recalibration of the system.

The following five changes are anticipated in the PRI: (1) the PRI results will be linked to the quality assurance system and several quality assurance questions will be added to the PRI; (2) hospitals will be required to complete the PRIs in place of the DMS-1 and hospital personnel may be required to attend a PRI training program; (3) a revised PRI will take the place of the DMS-1 for all functions within nursing homes; (4) a screening instrument will be added to the PRI and will be completed prior to placement of patients in nursing homes and will serve as a utilization review document within nursing homes for the first six months of a patient's stay; and (5) the format of the PRI may be revised to test the use of optical scanning to read the PRIs (rather than being keypunched). In addition, the DOH is developing an option to allow for electronic transfer of data from nursing homes to the DOH (i.e., transfer data from microcomputers via a modem or disk). It is difficult to state when the above changes will be implemented: the goal is to implement the first four changes during the first six months of 1986 with limited experiments with optical scanning at the same time. The electronic data transfer option is under study to determine if it is feasible.

Q: How reliable are the case mix auditors? What is done to assure that they are accurately assessing patients? Who should be contacted if questions or problems arise during the audit?

A: Reliability controls for the on-site review process include the following:

- Objective Independent Reviewers: An outside independent agency, contracting to provide audit services, increases objectivity and validity.
- Highly Qualified Reviewers: Nurses selected as reviewers must have an RN license, experience in long term care, and experience in patient assessment. Their high qualifications lead to a higher quality audit process.
- Complete Reviewer Training: Reviewers have specific training for audit process, including PRI training, training in audit procedures by DOH staff, class room practice on case studies, and on-site practice on nursing home patients with the actual audit forms.
- Reliable Audit Criteria: An objective audit process based on precise criteria has been established. Audit questions are generated by computer and tailored to specific facility residents.
- Written Back-up Resources: The PRI assessment instructions and procedures have been carefully documented in manuals. Step-by-Step procedures have been detailed for the audit process (both Stage I and later stages), in written instructions.
- Telephone HOTLINE: A HOTLINE telephone contact is available to reviewers for clarification of PRI interpretation and audit process questions.
- Communication Feedback: Frequent communication, both oral and written, between the contractor and DOH provides a feedback mechanism to detect and address problem areas quickly and thus increases reliability.
- Reviewer Monitoring: Monitoring of case mix reviewer performance takes place during daily call-ins to the contacting agent and during on-site visits by experienced senor staff. Management reports are reviewed for exceptions and appropriate action taken.
- Statistical Monitoring: The PRI data base is statistically analyzed for proper functioning of the reviewers and the system.

Specific questions regarding scheduling or in reference to problems which occur while the auditor is on-site should be

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Q: What are the implications under the new system for temporary conversion of HRF beds to SNF beds?

A: Under the new system, the line between SNF and HRF patients has been blurred. While there are a subset of more disabled patients who are considered appropriate only for SNF care, there is in essence a broader definition of appropriate HRF patients. Under these conditions, it would seem to be less likely that facilities would want to pursue conversions of beds based on increased patient disability. While temporary conversions are still available, it is assumed that fewer requests will be received.

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262

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NOTE: SAS INSTITUTE INC.
      SAS CIRCLE
      PO BOX 8000
      CARY, N.C.  27511-8000
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FREQUENCY TABLES FOR DIAGNOSIS GROUP AND
SYMPTOM GROUPS WITH AND WITHOUT PSYCHIATRIC DIAGNOSES

D1          FREQUENCY   CUM FREQ    PERCENT   CUM PERCENT

ABSENT         1938        1938      57.903       57.903
PRESENT        1409        3347      42.097      100.000

S2          FREQUENCY   CUM FREQ    PERCENT   CUM PERCENT

ABSENT         1252        1252      37.407       37.407
PRESENT        2095        3347      62.593      100.000

S2NO_PSY     FREQUENCY   CUM FREQ    PERCENT   CUM PERCENT

ABSENT          1378        1378      41.171       41.171
PRESENT         1969        3347      58.829      100.000

S3          FREQUENCY   CUM FREQ    PERCENT   CUM PERCENT

ABSENT         1830        1830      54.676       54.676
PRESENT        1517        3347      45.324      100.000

S3NO_PSY     FREQUENCY   CUM FREQ    PERCENT   CUM PERCENT

ABSENT          1896        1896      56.648       56.648
PRESENT         1451        3347      43.352      100.000
```

42% found with "Dementia" Diagnosis

62.6% found with 2 or more "Dementia" Symptoms

Removing "psychiatric" patients decreases number by 3.7%

45.3% found with 3 or more "Dementia" symptoms

Removing "psychiatric" patients decreases number by 2.0%

Note: The variables used for symptom designation of dementia are: Expressive Communication, Receptive Communication, Learning Ability, Motivation, and Refusal to Care for Oneself.

These questions all require high level judgements by the assessor; no standard tests were used to derive the response given. Further, the responses for the communication questions may have a pathological origin such as stroke, cancer, etc. Additionally, questions on motivation, learning and refusal were felt by clinicians to be unreliable due to what was being measured, and not the questio

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SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985    2
CROSSTABS OF SYMPTOM GROUPS BY DIAGNOSIS GROUP

 D1        S2MO_PSY   FREQUENCY   CUM FREQ   PERCENT   CUM PERCENT

 ABSENT    ABSENT        1165        1165     34.807      34.807
 ABSENT    PRESENT        773        1938     23.095      57.903
 PRESENT   ABSENT         213        2151      6.364      64.267
 PRESENT   PRESENT       1196        3347     35.733     100.000
```

Symptom, 2 or more Dementia

Diagnosis Dementia	Yes	No
Yes	35.7	6.4
No	23.1	34.8

29 % non conformance of definitions

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SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985    3
CROSSTABS OF SYMPTOM GROUPS BY DIAGNOSIS GROUP

 D1        S3MO_PSY   FREQUENCY   CUM FREQ   PERCENT   CUM PERCENT

 ABSENT    ABSENT        1456        1456     43.502      43.502
 ABSENT    PRESENT        482        1938     14.401      57.903
 PRESENT   ABSENT         440        2378     13.146      71.049
 PRESENT   PRESENT        969        3347     28.951     100.000
```

Symptom, 3 or more Dementia

Diagnosis Dementia	Yes	No
Yes	28.9	13.1
No	14.4	43.5

27 % non conformance of definitions

The pages that follow are for the Diagnosis defined Dementia group.

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985   4
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY SEXS

D1            SEXS

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|  TOTAL
---------+--------+--------+--------+
ABSENT   |       4|     476|    1458|   1934
         |       .|    56.9|   -56.9|
         |       .|   14.25|   43.64|  57.89
         |       .|   24.61|   75.39|
         |       .|   65.75|   55.71|
---------+--------+--------+--------+
PRESENT  |       2|     248|    1159|   1407
         |       .|   -56.9|    56.9|
         |       .|    7.42|   34.69|  42.11
         |       .|   17.63|   82.37|
         |       .|   34.25|   44.29|
---------+--------+--------+--------+
TOTAL           .      724     2617     3341
                .    21.67    78.33   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       23.418   DF=   1  PROB=0.0001
PHI                               0.084
CONTINGENCY COEFFICIENT           0.083
CRAMER'S V                        0.084
LIKELIHOOD RATIO CHISQUARE       23.790   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       23.006   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0000
                    (2-TAIL)                       PROB=0.0000
```

Male Female

Not Classified

Demented Classified

Higher percentage of males in non-demented group.

Applies to all tables.

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985   5
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY PAYORS

D1            PAYORS

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|       8|       9|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |    1304|     197|      73|      11|     297|       6|       8|      14|      28|   1938
         |   -15.6|    15.2|    27.8|     1.7|   -41.7|     1.9|     3.4|     3.0|     4.3|
         |   38.96|    5.89|    2.18|    0.33|    8.87|    0.18|    0.24|    0.42|    0.84|  57.90
         |   67.29|   10.17|    3.77|    0.57|   15.33|    0.31|    0.41|    0.72|    1.44|
         |   57.22|   62.74|   93.59|   68.75|   50.77|   85.71|  100.00|   73.68|   68.29|
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |     975|     117|       5|       5|     288|       1|       0|       5|      13|   1409
         |    15.6|   -15.2|   -27.8|    -1.7|    41.7|    -1.9|    -3.4|    -3.0|    -4.3|
         |   29.13|    3.50|    0.15|    0.15|    8.60|    0.03|    0.00|    0.15|    0.39|  42.10
         |   69.20|    8.30|    0.35|    0.35|   20.44|    0.07|    0.00|    0.35|    0.92|
         |   42.78|   37.26|    6.41|   31.25|   49.23|   14.29|    0.00|   26.32|   31.71|
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL        2279      314       78       16      585        7        8       19       41     3347
            68.09     9.38     2.33     0.48    17.48     0.21     0.24     0.57     1.22   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                       68.984   DF=   8  PROB=0.0001
PHI                               0.144
CONTINGENCY COEFFICIENT           0.142
CRAMER'S V                        0.144
LIKELIHOOD RATIO CHISQUARE       82.848   DF=   8  PROB=0.0001
```

Medicaid | Caid + Care | Care | VA | Private Pay | Blues | Insur. | Other | Rochester Medicare Demonstration

Both groups dominant payor is Medicaid.
Slightly higher private pay in demented group

Marital Status

```
SAS                                                          14:02 TUESDAY, DECEMBER 24, 1985   6
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY MARITAL9

D1          MARITAL9

FREQUENCY|
DEVIATION|          Married  Widowed   Single  Separated Divorced  Cannot Determine
PERCENT  |
ROW PCT  |
COL PCT  |       0|       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      0 |    285 |   1154 |    361 |     33 |    102 |      3 |   1938
         |   -0.6 |   -6.3 |  -59.1 |   50.6 |   -0.0 |   16.9 |   -1.6 |
         |   0.00 |   8.52 |  34.48 |  10.79 |   0.99 |   3.05 |   0.09 |  57.90
         |   0.00 |  14.71 |  59.55 |  18.63 |   1.70 |   5.26 |   0.15 |
         |   0.00 |  56.66 |  55.08 |  67.35 |  57.89 |  69.39 |  37.50 |
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      1 |    218 |    941 |    175 |     24 |     45 |      5 |   1409
         |    0.6 |    6.3 |   59.1 |  -50.6 |    0.0 |  -16.9 |    1.6 |
         |   0.03 |   6.51 |  28.11 |   5.23 |   0.72 |   1.34 |   0.15 |  42.10
         |   0.07 |  15.47 |  66.78 |  12.42 |   1.70 |   3.19 |   0.35 |
         | 100.00 |  43.34 |  44.92 |  32.65 |  42.11 |  30.61 |  62.50 |
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           1      503     2095      536       57      147        8     3347
             0.03    15.03    62.59    16.01     1.70     4.39     0.24   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                      37.475   DF=   6  PROB=0.0001
PHI                              0.106
CONTINGENCY COEFFICIENT          0.105
CRAMER'S V                       0.106
LIKELIHOOD RATIO CHISQUARE      38.601   DF=   6  PROB=0.0001
```

No real difference

Admission Location.

```
SAS                                                          14:02 TUESDAY, DECEMBER 24, 1985   7
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ADLOC11A

D1          ADLOC11A

FREQUENCY|
DEVIATION|         Home     Adult
PERCENT  |   Home  Home w/  w/  Home   HRF      SNF      Rehab    Psych    Hospital Hospice  Other    Cannot Determine
ROW PCT  |
COL PCT  |       1|       2|       3|       4|       5|       6|       7|       8|       9|      10|      11|      13|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |    157 |    176 |    148 |     59 |    167 |    175 |     26 |     42 |    968 |      0 |     13 |      7 |   1938
         |   20.3 |  -11.6 |   18.3 |   -3.5 |  -46.1 |    8.8 |    9.2 |   -1.4 |    2.2 |   -0.6 |    2.6 |    1.8 |
         |   4.69 |   5.26 |   4.42 |   1.76 |   4.99 |   5.23 |   0.78 |   1.25 |  28.92 |   0.00 |   0.39 |   0.21 |  57.90
         |   8.10 |   9.08 |   7.64 |   3.04 |   8.62 |   9.03 |   1.34 |   2.17 |  49.95 |   0.00 |   0.67 |   0.36 |
         |  66.53 |  54.32 |  66.07 |  54.63 |  45.38 |  60.98 |  89.66 |  56.00 |  58.03 |   0.00 |  72.22 |  77.78 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |     79 |    148 |     76 |     49 |    201 |    112 |      3 |     33 |    700 |      1 |      5 |      2 |   1409
         |  -20.3 |   11.6 |  -18.3 |    3.5 |   46.1 |   -8.8 |   -9.2 |    1.4 |   -2.2 |    0.6 |   -2.6 |   -1.8 |
         |   2.36 |   4.42 |   2.27 |   1.46 |   6.01 |   3.35 |   0.09 |   0.99 |  20.91 |   0.03 |   0.15 |   0.06 |  42.10
         |   5.61 |  10.50 |   5.39 |   3.48 |  14.27 |   7.95 |   0.21 |   2.34 |  49.68 |   0.07 |   0.35 |   0.14 |
         |  33.47 |  45.68 |  33.93 |  45.37 |  54.62 |  39.02 |  10.34 |  44.00 |  41.97 | 100.00 |  27.78 |  22.22 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL         236      324      224      108      368      287       29       75     1668        1       18        9     3347
             7.05     9.68     6.69     3.23    10.99     8.57     0.87     2.24    49.84     0.03     0.54     0.27   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      56.762   DF=  11  PROB=0.0001
PHI                              0.130
CONTINGENCY COEFFICIENT          0.129
CRAMER'S V                       0.130
LIKELIHOOD RATIO CHISQUARE      59.560   DF=  11  PROB=0.0001
```

no real difference

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY REASON12

D1          REASON12
```

Admission Reason
Question 12

```
FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|       8|       9|      10|      11|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |    251 |     14 |    954 |    150 |    277 |    126 |     52 |      3 |     47 |     14 |      2 |   1938
         | -181.5 |    3.6 |  123.1 |  -11.5 |  -21.8 |   38.6 |   16.7 |    0.1 |   16.9 |    4.2 |    0.8 |
         |   7.50 |   0.42 |  28.50 |   4.48 |   8.28 |   3.76 |   1.55 |   0.09 |   1.40 |   0.42 |   0.06 |  57.90
         |  12.95 |   0.72 |  49.23 |   7.74 |  14.29 |   6.50 |   2.68 |   0.15 |   2.43 |   0.72 |   0.10 |
         |  33.60 |  77.78 |  66.48 |  53.76 |  53.68 |  83.44 |  85.25 |  60.00 |  90.38 |  82.35 | 100.00 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |    496 |      4 |    481 |    129 |    239 |     25 |      9 |      2 |      5 |      3 |      0 |   1409
         |  181.5 |   -3.6 | -123.1 |   11.5 |   21.8 |  -38.6 |  -16.7 |   -0.1 |  -16.9 |   -4.2 |   -0.8 |
         |  14.82 |   0.12 |  14.37 |   3.85 |   7.14 |   0.75 |   0.27 |   0.06 |   0.15 |   0.09 |   0.00 |  42.10
         |  35.20 |   0.28 |  34.14 |   9.16 |  16.96 |   1.77 |   0.64 |   0.14 |   0.35 |   0.21 |   0.00 |
         |  66.40 |  22.22 |  33.52 |  46.24 |  46.32 |  16.56 |  14.75 |  40.00 |   9.62 |  17.65 |   0.00 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL         747       18     1435      279      516      151       61        5       52       17        2     3347
            22.32     0.54    42.87     8.34    15.42     4.51     1.82     0.15     1.55     0.51     0.06   100.00
(CONTINUED)

TABLE OF D1 BY REASON12

D1          REASON12

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      12|      13|      14|      15|      16|      17|      18|      19|      20|      22|      23|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      2 |      4 |     22 |      3 |      2 |      3 |      1 |      7 |      1 |      1 |      2 |   1938
         |    0.8 |   -0.1 |    9.3 |   -0.5 |    0.3 |    0.1 |    0.4 |    2.4 |    0.4 |   -0.7 |   -1.5 |
         |   0.06 |   0.12 |   0.66 |   0.09 |   0.06 |   0.09 |   0.03 |   0.21 |   0.03 |   0.03 |   0.06 |  57.90
         |   0.10 |   0.21 |   1.14 |   0.15 |   0.10 |   0.15 |   0.05 |   0.36 |   0.05 |   0.05 |   0.10 |
         | 100.00 |  57.14 | 100.00 |  50.00 |  66.67 |  60.00 | 100.00 |  87.50 | 100.00 |  33.33 |  33.33 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      0 |      3 |      0 |      3 |      1 |      2 |      0 |      1 |      0 |      2 |      4 |   1409
         |   -0.8 |    0.1 |   -9.3 |    0.5 |   -0.3 |   -0.1 |   -0.4 |   -2.4 |   -0.4 |    0.7 |    1.5 |
         |   0.00 |   0.09 |   0.00 |   0.09 |   0.03 |   0.06 |   0.00 |   0.03 |   0.00 |   0.06 |   0.12 |  42.10
         |   0.00 |   0.21 |   0.00 |   0.21 |   0.07 |   0.14 |   0.00 |   0.07 |   0.00 |   0.14 |   0.28 |
         |   0.00 |  42.86 |   0.00 |  50.00 |  33.33 |  40.00 |   0.00 |  12.50 |   0.00 |  66.67 |  66.67 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           2        7       22        6        3        5        1        8        1        3        6     3347
             0.06     0.21     0.66     0.18     0.09     0.15     0.03     0.24     0.03     0.09     0.18   100.00
```

Patients with Dementia admitted more often for Mental disability than those without it.

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                   344.479   DF=  21  PROB=0.0001
PHI                            0.321
CONTINGENCY COEFFICIENT        0.306
CRAMER'S V                     0.321
LIKELIHOOD RATIO CHISQUARE   357.018   DF=  21  PROB=0.0001
```

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985   10
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY COMA14

D1            COMA14

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |   .      |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        3 |     19 |   1916 |   1935
         |        . |   -4.2 |    4.2 |
         |        . |   0.57 |  57.37 |  57.93
         |        . |   0.98 |  99.02 |
         |        . |  47.50 |  58.06 |
---------+----------+--------+--------+
PRESENT  |        4 |     21 |   1384 |   1405
         |        . |    4.2 |   -4.2 |
         |        . |   0.63 |  41.44 |  42.07
         |        . |   1.49 |  98.51 |
         |        . |  52.50 |  41.94 |
---------+----------+--------+--------+
TOTAL             .       40     3300     3340
                  .     1.20    98.80   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          1.808    DF=   1  PROB=0.1787
PHI                                -0.023
CONTINGENCY COEFFICIENT             0.023
CRAMER'S V                          0.023
LIKELIHOOD RATIO CHISQUARE          1.782    DF=   1  PROB=0.1819
CONTINUITY ADJ. CHI-SQUARE          1.401    DF=   1  PROB=0.2365
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.1187
                    (2-TAIL)                          PROB=0.1967
```

Comatose:

no real difference

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985   11
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY TERM14

D1            TERM14

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |   .      |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        3 |     27 |   1908 |   1935
         |        . |    3.2 |   -3.2 |
         |        . |   0.81 |  57.13 |  57.93
         |        . |   1.40 |  98.60 |
         |        . |  65.85 |  57.84 |
---------+----------+--------+--------+
PRESENT  |        4 |     14 |   1391 |   1405
         |        . |   -3.2 |    3.2 |
         |        . |   0.42 |  41.65 |  42.07
         |        . |   1.00 |  99.00 |
         |        . |  34.15 |  42.16 |
---------+----------+--------+--------+
TOTAL             .       41     3299     3340
                  .     1.23    98.77   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          1.068    DF=   1  PROB=0.3013
PHI                                 0.018
CONTINGENCY COEFFICIENT             0.018
CRAMER'S V                          0.018
LIKELIHOOD RATIO CHISQUARE          1.092    DF=   1  PROB=0.2961
CONTINUITY ADJ. CHI-SQUARE          0.765    DF=   1  PROB=0.3819
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.1916
                    (2-TAIL)                          PROB=0.3419
```

Terminally Ill

no real difference

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985   12
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ALCOHL14

D1          ALCOHL14

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .     |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        9 |     64 |   1865 |   1929
         |        . |    3.8 |   -3.8 |
         |        . |   1.92 |  55.94 |  57.86
         |        . |   3.32 |  96.68 |
         |        . |  61.54 |  57.74 |
---------+----------+--------+--------+
PRESENT  |        4 |     40 |   1366 |   1406
         |        . |   -3.8 |    3.8 |
         |        . |   1.20 |  40.94 |  42.14
         |        . |   2.85 |  97.15 |
         |        . |  38.46 |  42.26 |
---------+----------+--------+--------+
TOTAL             .      104     3230     3334
                  .     3.12    96.88   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         0.596   DF=   1  PROB=0.4400
PHI                                0.013
CONTINGENCY COEFFICIENT            0.013
CRAMER'S V                         0.013
LIKELIHOOD RATIO CHISQUARE         0.601   DF=   1  PROB=0.4380
CONTINUITY ADJ. CHI-SQUARE         0.451   DF=   1  PROB=0.5020
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.2520
                    (2-TAIL)                        PROB=0.4807
```

Alcohol Abuser
no real
difference

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985   13
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY DRUG14

D1          DRUG14

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .     |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        9 |      7 |   1922 |   1929
         |        . |    2.4 |   -2.4 |
         |        . |   0.21 |  57.65 |  57.86
         |        . |   0.36 |  99.64 |
         |        . |  87.50 |  57.79 |
---------+----------+--------+--------+
PRESENT  |        4 |      1 |   1404 |   1406
         |        . |   -2.4 |    2.4 |
         |        . |   0.03 |  42.11 |  42.14
         |        . |   0.07 |  99.93 |
         |        . |  12.50 |  42.21 |
---------+----------+--------+--------+
TOTAL             .        8     3326     3334
                  .     0.24    99.76   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                         2.890   DF=   1  PROB=0.0891
PHI                                0.029
CONTINGENCY COEFFICIENT            0.029
CRAMER'S V                         0.029
LIKELIHOOD RATIO CHISQUARE         3.357   DF=   1  PROB=0.0668
CONTINUITY ADJ. CHI-SQUARE         1.800   DF=   1  PROB=0.1798
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0855
                    (2-TAIL)                        PROB=0.1497
```

Drug Abuser
no real difference

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985   14
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY VISION17

D1            VISION17

FREQUENCY|
DEVIATION|        Well      Adequate  Moderate  Severe    Cannot
 PERCENT |                            Loss      Loss      Determine.
 ROW PCT |
 COL PCT |      .|       1|       2|       3|       4|       5|  TOTAL
---------+-------+--------+--------+--------+--------+--------+
ABSENT   |      2|    619 |    900 |    253 |    112 |     52 |   1936
         |      .|  139.2 |    1.7 |  -96.6 |   -6.1 |  -38.3 |
         |      .|  18.51 |  26.91 |   7.56 |   3.35 |   1.55 |  57.88
       - |      .|  31.97 |  46.49 |  13.07 |   5.79 |   2.69 |
         |      .|  74.67 |  57.99 |  41.89 |  54.90 |  33.33 |
---------+-------+--------+--------+--------+--------+--------+
PRESENT  |      0|    210 |    652 |    351 |     92 |    104 |   1409
         |      .| -139.2 |   -1.7 |   96.6 |    6.1 |   38.3 |
         |      .|   6.28 |  19.49 |  10.49 |   2.75 |   3.11 |  42.12
         |      .|  14.90 |  46.27 |  24.91 |   6.53 |   7.38 |
         |      .|  25.33 |  42.01 |  58.11 |  45.10 |  66.67 |
---------+-------+--------+--------+--------+--------+--------+
TOTAL           .     829     1552      604      204      156     3345
                .   24.78    46.40    18.06     6.10     4.66   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    198.509   DF=   4  PROB=0.0001
PHI                             0.244
CONTINGENCY COEFFICIENT         0.237
CRAMER'S V                      0.244
LIKELIHOOD RATIO CHISQUARE    202.921   DF=   4  PROB=0.0001
```

Vision:

Those classified as demented have greater problems with vision

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985   15
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY HEAR18

D1            HEAR18

FREQUENCY|
DEVIATION|        Adequate  Adequate  Moderate  Severe    Cannot
 PERCENT |                            Loss      Loss      Determine.
 ROW PCT |
 COL PCT |      .|       1|       2|       3|       4|       5|  TOTAL
---------+-------+--------+--------+--------+--------+--------+
ABSENT   |      1|   1032 |    566 |    228 |     71 |     40 |   1937
         |      .|  141.7 |  -39.5 |  -55.7 |  -13.5 |  -32.9 |
         |      .|  30.84 |  16.92 |   6.81 |   2.12 |   1.20 |  57.89
         |      .|  53.28 |  29.22 |  11.77 |   3.67 |   2.07 |
         |      .|  67.10 |  54.11 |  46.53 |  48.63 |  31.75 |
---------+-------+--------+--------+--------+--------+--------+
PRESENT  |      0|    506 |    480 |    262 |     75 |     86 |   1409
         |      .| -141.7 |   39.5 |   55.7 |   13.5 |   32.9 |
         |      .|  15.12 |  14.35 |   7.83 |   2.24 |   2.57 |  42.11
         |      .|  35.91 |  34.07 |  18.59 |   5.32 |   6.10 |
         |      .|  32.90 |  45.89 |  53.47 |  51.37 |  68.25 |
---------+-------+--------+--------+--------+--------+--------+
TOTAL           .    1538     1046      490      146      126     3346
                .   45.97    31.26    14.64     4.36     3.77   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    126.047   DF=   4  PROB=0.0001
PHI                             0.194
CONTINGENCY COEFFICIENT         0.191
CRAMER'S V                      0.194
LIKELIHOOD RATIO CHISQUARE    128.646   DF=   4  PROB=0.0001
```

Hearing

Those classified as demented have greater problems with hearing.

```
SAS                                                                            14:02 TUESDAY, DECEMBER 24, 1985   16
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY EXPRES19

D1          EXPRES19

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .|       0|       1|       2|       3|       4|       5|       6|  TOTAL
---------+-------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      1|       1|    1427|     278|      37|      95|      82|      17|   1937
         |      .|     0.4|   150.5|   -34.0|     5.2|   -13.8|  -105.6|    -2.7|
         |     ..|    0.03|   42.65|    8.31|    1.11|    2.84|    2.45|    0.51|  57.89
         |      .|    0.05|   73.67|   14.35|    1.91|    4.90|    4.23|    0.88|
         |      .|  100.00|   64.72|   51.58|   67.27|   50.53|   25.31|   50.00|
---------+-------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      0|       0|     778|     261|      18|      93|     242|      17|   1409
         |      .|    -0.4|  -150.5|    34.0|    -5.2|    13.8|   105.6|     2.7|
         |      .|    0.00|   23.25|    7.80|    0.54|    2.78|    7.23|    0.51|  42.11
         |      .|    0.00|   55.22|   18.52|    1.28|    6.60|   17.18|    1.21|
         |      .|    0.00|   35.28|   48.42|   32.73|   49.47|   74.69|   50.00|
---------+-------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           .        1     2205      539       55      188      324       34     3346
                .     0.03    65.90    16.11     1.64     5.62     9.68     1.02   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    199.811   DF=   6  PROB=0.0001
PHI                             0.244
CONTINGENCY COEFFICIENT         0.237
CRAMER'S V                      0.244
LIKELIHOOD RATIO CHISQUARE    201.441   DF=   6  PROB=0.0001
```

Speaks

Difficulty.

Sign Language

Gestures

Cannot

Cannot Determine

Expressive:

Those classified as demented have greater problems with expression.

Still though, 55% of classified demented patients speak and are understood with no problems.

```
SAS                                                                            14:02 TUESDAY, DECEMBER 24, 1985   17
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY RECEPT20

D1          RECEPT20

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      :|       1|       2|       3|       4|       5|       6|  TOTAL
---------+-------+--------+--------+--------+--------+--------+--------+
ABSENT   |      2|    1366|     420|      13|      17|      70|      50|   1936
         |      .|   299.9|  -163.4|    -2.0|   -21.2|   -82.8|   -30.4|
         |      .|   40.84|   12.55|    0.39|    0.51|    2.09|    1.49|  57.88
         |      .|   70.56|   21.69|    0.67|    0.88|    3.62|    2.58|
         |      .|   74.16|   41.67|   50.00|   25.76|   26.52|   35.97|
---------+-------+--------+--------+--------+--------+--------+--------+
PRESENT  |      0|     476|     588|      13|      49|     194|      89|   1409
         |      .|  -299.9|   163.4|     2.0|    21.2|    82.8|    30.4|
         |      .|   14.23|   17.58|    0.39|    1.46|    5.80|    2.66|  42.12
         |      .|   33.78|   41.73|    0.92|    3.48|   13.77|    6.32|
         |      .|   25.84|   58.33|   50.00|   74.24|   73.48|   64.03|
---------+-------+--------+--------+--------+--------+--------+--------+
TOTAL           .     1842     1008       26       66      264      139     3345
                .    55.07    30.13     0.78     1.97     7.89     4.16   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    471.394   DF=   5  PROB=0.0001
PHI                             0.375
CONTINGENCY COEFFICIENT         0.351
CRAMER'S V                      0.375
LIKELIHOOD RATIO CHISQUARE    481.179   DF=   5  PROB=0.0001
```

Oral Communication

Limited

Lip reading Sign Language

Gestures

Unable

Cannot Determine

Receptive Communication

Those classified as demented have greater problems with reception. Same pattern as with hearing question.

```
SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985   18
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY DECUGR23

D1          DECUGR23

FREQUENCY|
DEVIATION|   None      1.       2.       3.       4.
 PERCENT |
 ROW PCT |
 COL PCT |       0|       1|       2|       3|       4|  TOTAL
---------+--------+--------+--------+--------+--------+
ABSENT   |   1709 |     72 |     81 |     56 |     20 |   1938
         |   14.8 |   -5.0 |   -1.8 |   -7.1 |   -0.8 |
         |  51.06 |   2.15 |   2.42 |   1.67 |   0.60 |  57.90
         |  88.18 |   3.72 |   4.18 |   2.89 |   1.03 |
         |  58.41 |  54.14 |  56.64 |  51.38 |  55.56 |
---------+--------+--------+--------+--------+--------+
PRESENT  |   1217 |     61 |     62 |     53 |     16 |   1409
         |  -14.8 |    5.0 |    1.8 |    7.1 |    0.8 |
         |  36.36 |   1.82 |   1.85 |   1.58 |   0.48 |  42.10
         |  86.37 |   4.33 |   4.40 |   3.76 |   1.14 |
         |  41.59 |  45.86 |  43.36 |  48.62 |  44.44 |
---------+--------+--------+--------+--------+--------+
TOTAL        2926      133      143      109       36     3347
            87.42     3.97     4.27     3.26     1.08   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        3.159   DF=   4  PROB=0.5316
PHI                               0.031
CONTINGENCY COEFFICIENT           0.031
CRAMER'S V                        0.031
LIKELIHOOD RATIO CHISQUARE        3.133   DF=   4  PROB=0.5358
```

Decubitus grade

no real difference

```
SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985   19
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ANLGS125

D1          ANLGS125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1295 |    643 |   1938
         | -124.8 |  124.8 |
         |  38.69 |  19.21 |  57.90
         |  66.82 |  33.18 |
         |  52.81 |  71.84 |
---------+--------+--------+
PRESENT  |   1157 |    252 |   1409
         |  124.8 | -124.8 |
         |  34.57 |   7.53 |  42.10
         |  82.11 |  17.89 |
         |  47.19 |  28.16 |
---------+--------+--------+
TOTAL        2452      895     3347
            73.26    26.74   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       97.407   DF=   1  PROB=0.0001
PHI                              -0.171
CONTINGENCY COEFFICIENT           0.168
CRAMER'S V                        0.171
LIKELIHOOD RATIO CHISQUARE      100.523   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       96.628   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0000
                    (2-TAIL)                       PROB=0.0000
```

Medication Use
Analgosics.

More analgesics
used by non-demented

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985   20
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ABIOT125

D1            ABIOT125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1668 |    270 |   1938
         |   -0.2 |    0.2 |
         |  49.84 |   8.07 |  57.90
         |  86.07 |  13.93 |
         |  57.90 |  57.94 |
---------+--------+--------+
PRESENT  |   1213 |    196 |   1409
         |    0.2 |   -0.2 |
         |  36.24 |   5.86 |  42.10
         |  86.09 |  13.91 |
         |  42.10 |  42.06 |
---------+--------+--------+
TOTAL        2881      466     3347
            86.08    13.92   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          0.000   DF=   1  PROB=0.9880
PHI                                -0.000
CONTINGENCY COEFFICIENT             0.000
CRAMER'S V                          0.000
LIKELIHOOD RATIO CHISQUARE          0.000   DF=   1  PROB=0.9880
CONTINUITY ADJ. CHI-SQUARE          0.001   DF=   1  PROB=0.9737
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.5139
                    (2-TAIL)                         PROB=1.0000
```

Antibiotics:

same use by both

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985   21
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ACOAG125

D1            ACOAG125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1888 |     50 |   1938
         |   -6.6 |    6.6 |
         |  56.41 |   1.49 |  57.90
         |  97.42 |   2.58 |
         |  57.70 |  66.67 |
---------+--------+--------+
PRESENT  |   1384 |     25 |   1409
         |    6.6 |   -6.6 |
         |  41.35 |   0.75 |  42.10
         |  98.23 |   1.77 |
         |  42.30 |  33.33 |
---------+--------+--------+
TOTAL        3272       75     3347
            97.76     2.24   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          2.417   DF=   1  PROB=0.1200
PHI                                -0.027
CONTINGENCY COEFFICIENT             0.027
CRAMER'S V                          0.027
LIKELIHOOD RATIO CHISQUARE          2.477   DF=   1  PROB=0.1155
CONTINUITY ADJ. CHI-SQUARE          2.064   DF=   1  PROB=0.1508
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0743
                    (2-TAIL)                         PROB=0.1256
```

Anti coagulants
same use by
both.

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985   22
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ACNVL12S

D1          ACNVL12S

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1789 |    149 |   1938
         |   -9.5 |    9.5 |
         |  53.45 |   4.45 |  57.90
         |  92.31 |   7.69 |
         |  57.60 |  61.83 |
---------+--------+--------+
PRESENT  |   1317 |     92 |   1409
         |    9.5 |   -9.5 |
         |  39.35 |   2.75 |  42.10
         |  93.47 |   6.53 |
         |  42.40 |  38.17 |
---------+--------+--------+
TOTAL        3106      241     3347
            92.80     7.20   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         1.640   DF=   1  PROB=0.2004
PHI                               -0.022
CONTINGENCY COEFFICIENT            0.022
CRAMER'S V                         0.022
LIKELIHOOD RATIO CHISQUARE         1.664   DF=   1  PROB=0.1984
CONTINUITY ADJ. CHI-SQUARE         1.471   DF=   1  PROB=0.2252
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.1123
                    (2-TAIL)                        PROB=0.2228
```

Anticonvulsants:
same use by
both.

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985   23
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ADPRS12S

D1          ADPRS12S

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1793 |    145 |   1938
         |  -16.9 |   16.9 |
         |  53.57 |   4.33 |  57.90
         |  92.52 |   7.48 |
         |  57.39 |  65.02 |
---------+--------+--------+
PRESENT  |   1331 |     78 |   1409
         |   16.9 |  -16.9 |
         |  39.77 |   2.33 |  42.10
         |  94.46 |   5.54 |
         |  42.61 |  34.98 |
---------+--------+--------+
TOTAL        3124      223     3347
            93.34     6.66   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         4.968   DF=   1  PROB=0.0258
PHI                               -0.039
CONTINGENCY COEFFICIENT            0.039
CRAMER'S V                         0.039
LIKELIHOOD RATIO CHISQUARE         5.064   DF=   1  PROB=0.0245
CONTINUITY ADJ. CHI-SQUARE         4.561   DF=   1  PROB=0.0309
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0149
                    (2-TAIL)                        PROB=0.0294
```

Anti depressants

same use by
both

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985   24
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY AHYP125

D1          AHYP125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1637 |    301 |   1938
         |  -44.5 |   44.5 |
         |  48.91 |   8.99 |  57.90
         |  84.47 |  15.53 |
         |  56.37 |  67.95 |
---------+--------+--------+
PRESENT  |   1267 |    142 |   1409
         |   44.5 |  -44.5 |
         |  37.85 |   4.24 |  42.10
         |  89.92 |  10.08 |
         |  43.63 |  32.05 |
---------+--------+--------+
TOTAL        2904      443     3347
            86.76    13.24   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          21.128   DF=   1  PROB=0.0001
PHI                                 -0.079
CONTINGENCY COEFFICIENT              0.079
CRAMER'S V                           0.079
LIKELIHOOD RATIO CHISQUARE          21.670   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          20.886   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Anti hypertensives.
slightly greater use
by non demented.

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985   25
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY APLAS125

D1          APLAS125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1921 |     17 |   1938
         |   -3.7 |    3.7 |
         |  57.39 |   0.51 |  57.90
         |  99.12 |   0.88 |
         |  57.79 |  73.91 |
---------+--------+--------+
PRESENT  |   1403 |      6 |   1409
         |    3.7 |   -3.7 |
         |  41.92 |   0.18 |  42.10
         |  99.57 |   0.43 |
         |  42.21 |  26.09 |
---------+--------+--------+
TOTAL        3324       23     3347
            99.31     0.69   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           2.435   DF=   1  PROB=0.1188
PHI                                 -0.027
CONTINGENCY COEFFICIENT              0.027
CRAMER'S V                           0.027
LIKELIHOOD RATIO CHISQUARE           2.574   DF=   1  PROB=0.1086
CONTINUITY ADJ. CHI-SQUARE           1.819   DF=   1  PROB=0.1774
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0855
                    (2-TAIL)                          PROB=0.1403
```

Antineoplastic.
same use by
both

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985   26
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY APARK125

D1            APARK125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1809 |    129 |   1938
         |   -0.5 |    0.5 |
         |  54.05 |   3.85 |  57.90
         |  93.34 |   6.66 |
         |  57.89 |  58.11 |
---------+--------+--------+
PRESENT  |   1316 |     93 |   1409
         |    0.5 |   -0.5 |
         |  39.32 |   2.78 |  42.10
         |  93.40 |   6.60 |
         |  42.11 |  41.89 |
---------+--------+--------+
TOTAL        3125      222     3347
            93.37     6.63   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          0.004   DF=   1  PROB=0.9468
PHI                                -0.001
CONTINGENCY COEFFICIENT             0.001
CRAMER'S V                          0.001
LIKELIHOOD RATIO CHISQUARE          0.004   DF=   1  PROB=0.9468
CONTINUITY ADJ. CHI-SQUARE          0.000   DF=   1  PROB=0.9981
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.5037
                    (2-TAIL)                         PROB=1.0000
```

Antiparkinson
same use by
both

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985   27
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ARHUM125

D1            ARHUM125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1778 |    160 |   1938
         |  -40.1 |   40.1 |
         |  53.12 |   4.78 |  57.90
         |  91.74 |   8.26 |
         |  56.62 |  77.29 |
---------+--------+--------+
PRESENT  |   1362 |     47 |   1409
         |   40.1 |  -40.1 |
         |  40.69 |   1.40 |  42.10
         |  96.66 |   3.34 |
         |  43.38 |  22.71 |
---------+--------+--------+
TOTAL        3140      207     3347
            93.82     6.18   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         34.040   DF=   1  PROB=0.0001
PHI                                -0.101
CONTINGENCY COEFFICIENT             0.100
CRAMER'S V                          0.101
LIKELIHOOD RATIO CHISQUARE         36.501   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE         33.197   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0000
                    (2-TAIL)                         PROB=0.0000
```

Anti rheumatic
slightly higher use
by non-demented.

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY CARDC125

D1           CARDC125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1284 |    654 |   1938
         |  -54.1 |   54.1 |
         |  38.36 |  19.54 |  57.90
         |  66.25 |  33.75 |
         |  55.56 |  63.13 |
---------+--------+--------+
PRESENT  |   1027 |    382 |   1409
         |   54.1 |  -54.1 |
         |  30.68 |  11.41 |  42.10
         |  72.89 |  27.11 |
         |  44.44 |  36.87 |
---------+--------+--------+
TOTAL        2311     1036     3347
            69.05    30.95   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          16.804   DF=   1  PROB=0.0001
PHI                                 -0.071
CONTINGENCY COEFFICIENT              0.071
CRAMER'S V                           0.071
LIKELIHOOD RATIO CHISQUARE          16.926   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          16.498   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Cardiac Regulators
slightly higher use
by non-demented

Rensselaer Polytechnic Institute

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY DIURT125

D1           DIURT125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1185 |    753 |   1938
         |  -84.2 |   84.2 |
         |  35.40 |  22.50 |  57.90
         |  61.15 |  38.85 |
         |  54.06 |  65.19 |
---------+--------+--------+
PRESENT  |   1007 |    402 |   1409
         |   84.2 |  -84.2 |
         |  30.09 |  12.01 |  42.10
         |  71.47 |  28.53 |
         |  45.94 |  34.81 |
---------+--------+--------+
TOTAL        2192     1155     3347
            65.49    34.51   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          38.473   DF=   1  PROB=0.0001
PHI                                 -0.107
CONTINGENCY COEFFICIENT              0.107
CRAMER'S V                           0.107
LIKELIHOOD RATIO CHISQUARE          38.882   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          38.016   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Diuretics

greater use by
non demented.

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985   30
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ELECT125

D1          ELECT125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1531 |    407 |   1938
         |  -36.4 |   36.4 |
         |  45.74 |  12.16 |  57.90
         |  79.00 |  21.00 |
         |  56.56 |  63.59 |
---------+--------+--------+
PRESENT  |   1176 |    233 |   1409
         |   36.4 |  -36.4 |
         |  35.14 |   6.96 |  42.10
         |  83.46 |  16.54 |
         |  43.44 |  36.41 |
---------+--------+--------+
TOTAL        2707      640     3347
            80.88    19.12   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     10.515   DF=   1  PROB=0.0012
PHI                            -0.056
CONTINGENCY COEFFICIENT         0.056
CRAMER'S V                      0.056
LIKELIHOOD RATIO CHISQUARE     10.635   DF=   1  PROB=0.0011
CONTINUITY ADJ. CHI-SQUARE     10.228   DF=   1  PROB=0.0014
FISHER'S EXACT TEST (1-TAIL)                     PROB=0.0007
                    (2-TAIL)                     PROB=0.0012
```

Electrolytes
almost same use by
both.

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985   31
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY HYGLY125

D1          HYGLY125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1817 |    121 |   1938
         |  -11.0 |   11.0 |
         |  54.29 |   3.62 |  57.90
         |  93.76 |   6.24 |
         |  57.55 |  63.68 |
---------+--------+--------+
PRESENT  |   1340 |     69 |   1409
         |   11.0 |  -11.0 |
         |  40.04 |   2.06 |  42.10
         |  95.10 |   4.90 |
         |  42.45 |  36.32 |
---------+--------+--------+
TOTAL        3157      190     3347
            94.32     5.68   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      2.762   DF=   1  PROB=0.0966
PHI                            -0.029
CONTINGENCY COEFFICIENT         0.029
CRAMER'S V                      0.029
LIKELIHOOD RATIO CHISQUARE      2.802   DF=   1  PROB=0.0942
CONTINUITY ADJ. CHI-SQUARE      2.517   DF=   1  PROB=0.1127
FISHER'S EXACT TEST (1-TAIL)                     PROB=0.0556
                    (2-TAIL)                     PROB=0.1119
```

Hypoglycemics
same use

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS                14:02 TUESDAY, DECEMBER 24, 1985   32
WITH PAI VARIABLES

TABLE OF D1 BY HYPNO125

D1          HYPNO125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |   TOTAL
---------+--------+--------+
ABSENT   |   1744 |    194 |    1938
         |  -38.3 |   38.3 |
         |  52.11 |   5.80 |   57.90
         |  89.99 |  10.01 |
         |  56.75 |  70.80 |
---------+--------+--------+
PRESENT  |   1329 |     80 |    1409
         |   38.3 |  -38.3 |
         |  39.71 |   2.39 |   42.10
         |  94.32 |   5.68 |
         |  43.25 |  29.20 |
---------+--------+--------+
TOTAL        3073      274      3347
            91.81     8.19    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          20.375   DF=   1  PROB=0.0001
PHI                                 -0.078
CONTINGENCY COEFFICIENT              0.078
CRAMER'S V                           0.078
LIKELIHOOD RATIO CHISQUARE          21.159   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          19.802   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Hypnotics

slightly higher use by non demented.

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS                14:02 TUESDAY, DECEMBER 24, 1985   33
WITH PAI VARIABLES

TABLE OF D1 BY INSUL125

D1          INSUL125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |   TOTAL
---------+--------+--------+
ABSENT   |   1830 |    108 |    1938
         |   -4.4 |    4.4 |
         |  54.68 |   3.23 |   57.90
         |  94.43 |   5.57 |
         |  57.77 |  60.34 |
---------+--------+--------+
PRESENT  |   1338 |     71 |    1409
         |    4.4 |   -4.4 |
         |  39.98 |   2.12 |   42.10
         |  94.96 |   5.04 |
         |  42.23 |  39.66 |
---------+--------+--------+
TOTAL        3168      179      3347
            94.65     5.35    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           0.489   DF=   1  PROB=0.4980
PHI                                 -0.012
CONTINGENCY COEFFICIENT              0.012
CRAMER'S V                           0.012
LIKELIHOOD RATIO CHISQUARE           0.462   DF=   1  PROB=0.4969
CONTINUITY ADJ. CHI-SQUARE           0.360   DF=   1  PROB=0.5487
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.2752
                    (2-TAIL)                          PROB=0.5340
```

Insulin
scarce use

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985   34
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY NARCO125

D1          NARCO125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1806 |    132 |   1938
         |  -27.8 |   27.8 |
         |  53.96 |   3.94 |  57.90
         |  93.19 |   6.81 |
         |  57.03 |  73.33 |
---------+--------+--------+
PRESENT  |   1361 |     48 |   1409
         |   27.8 |  -27.8 |
         |  40.66 |   1.43 |  42.10
         |  96.59 |   3.41 |
         |  42.97 |  26.67 |
---------+--------+--------+
TOTAL        3167      180     3347
            94.62     5.38   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        18.582    DF=    1  PROB=0.0001
PHI                               -0.075
CONTINGENCY COEFFICIENT            0.074
CRAMER'S V                         0.075
LIKELIHOOD RATIO CHISQUARE        19.537    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        17.919    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Narcotics.
same use by
both

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985   35
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY PSYTR125

D1          PSYTR125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1704 |    234 |   1938
         |   71.1 |  -71.1 |
         |  50.91 |   5.99 |  57.90
         |  87.93 | [illegible] |
         |  60.43 | [illegible] |
---------+--------+--------+
PRESENT  |   1116 |    293 |   1409
         |  -71.1 |   71.1 |
         |  33.34 |   8.75 |  42.10
         |  79.21 |  20.79 |
         |  39.57 |  55.60 |
---------+--------+--------+
TOTAL        2820      527     3347
            84.25    15.75   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        46.766    DF=    1  PROB=0.0001
PHI                                0.118
CONTINGENCY COEFFICIENT            0.117
CRAMER'S V                         0.118
LIKELIHOOD RATIO CHISQUARE        46.167    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        46.113    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Psychotropics.
higher use by
demented group.

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985   36
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY RESPY125

D1            RESPY125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1844 |     94 |   1938
         |  -18.1 |   18.1 |
         |  55.09 |   2.81 |  57.90
         |  95.15 |   4.85 |
         |  57.34 |  71.76 |
---------+--------+--------+
PRESENT  |   1372 |     37 |   1409
         |   18.1 |  -18.1 |
         |  40.99 |   1.11 |  42.10
         |  97.37 |   2.63 |
         |  42.66 |  28.24 |
---------+--------+--------+
TOTAL        3216      131     3347
            96.09     3.91   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         10.734   DF=    1  PROB=0.0011
PHI                                -0.057
CONTINGENCY COEFFICIENT             0.057
CRAMER'S V                          0.057
LIKELIHOOD RATIO CHISQUARE         11.214   DF=    1  PROB=0.0008
CONTINUITY ADJ. CHI-SQUARE         10.160   DF=    1  PROB=0.0014
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0006
                    (2-TAIL)                          PROB=0.0011
```

Respiratory Dilators
same use

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985   37
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY THYRD125

D1            THYRD125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1845 |     93 |   1938
         |  -11.9 |   11.9 |
         |  55.12 |   2.78 |  57.90
         |  95.20 |   4.80 |
         |  57.53 |  66.43 |
---------+--------+--------+
PRESENT  |   1362 |     47 |   1409
         |   11.9 |  -11.9 |
         |  40.69 |   1.40 |  42.10
         |  96.66 |   3.34 |
         |  42.47 |  33.57 |
---------+--------+--------+
TOTAL        3207      140     3347
            95.82     4.18   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          4.357   DF=    1  PROB=0.0369
PHI                                -0.036
CONTINGENCY COEFFICIENT             0.036
CRAMER'S V                          0.036
LIKELIHOOD RATIO CHISQUARE          4.459   DF=    1  PROB=0.0347
CONTINUITY ADJ. CHI-SQUARE          4.000   DF=    1  PROB=0.0455
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0219
                    (2-TAIL)                          PROB=0.0439
```

Thyroid Preparations
same use

```
SAS                                                                       14:02 TUESDAY, DECEMBER 24, 1985   38
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY TRANQ125

D1          TRANQ125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1696 |    242 |   1938
         |   23.8 |  -23.8 |
         |  50.67 |   7.23 |  57.90
         |  87.51 |  12.49 |
         |  58.73 |  52.72 |
---------+--------+--------+
PRESENT  |   1192 |    217 |   1409
         |  -23.8 |   23.8 |
         |  35.61 |   6.48 |  42.10
         |  84.60 |  15.40 |
         |  41.27 |  47.28 |
---------+--------+--------+
TOTAL        2888      469     3347
            86.29    13.71   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           5.864   DF=   1  PROB=0.0155
PHI                                  0.042
CONTINGENCY COEFFICIENT              0.042
CRAMER'S V                           0.042
LIKELIHOOD RATIO CHISQUARE           5.809   DF=   1  PROB=0.0159
CONTINUITY ADJ. CHI-SQUARE           5.610   DF=   1  PROB=0.0179
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0091
                    (2-TAIL)                          PROB=0.0167
```

Tranquilizers
same use

```
SAS                                                                       14:02 TUESDAY, DECEMBER 24, 1985   39
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY VASOD125

D1          VASOD125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1680 |    258 |   1938
         |  -29.9 |   29.9 |
         |  50.19 |   7.71 |  57.90
         |  86.69 |  13.31 |
         |  56.89 |  65.48 |
---------+--------+--------+
PRESENT  |   1273 |    136 |   1409
         |   29.9 |  -29.9 |
         |  38.03 |   4.06 |  42.10
         |  90.35 |   9.65 |
         |  43.11 |  34.52 |
---------+--------+--------+
TOTAL        2953      394     3347
            88.23    11.77   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          10.525   DF=   1  PROB=0.0012
PHI                                 -0.056
CONTINGENCY COEFFICIENT              0.056
CRAMER'S V                           0.056
LIKELIHOOD RATIO CHISQUARE          10.718   DF=   1  PROB=0.0011
CONTINUITY ADJ. CHI-SQUARE          10.176   DF=   1  PROB=0.0014
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0007
                    (2-TAIL)                          PROB=0.0011
```

Vasodilators
slightly higher
use by
non demented.

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985   40
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY OMEDS125

D1          OMEDS125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |    615 |   1323 |   1938
         |  -42.8 |   42.8 |
         |  18.37 |  39.53 |  57.90
         |  31.73 |  68.27 |
         |  54.14 |  59.84 |
---------+--------+--------+
PRESENT  |    521 |    888 |   1409
         |   42.8 |  -42.8 |
         |  15.57 |  26.53 |  42.10
         |  36.98 |  63.02 |
         |  45.86 |  40.16 |
---------+--------+--------+
TOTAL        1136     2211     3347
            33.94    66.06   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        10.002    DF=    1  PROB=0.0016
PHI                               -0.055
CONTINGENCY COEFFICIENT            0.055
CRAMER'S V                        -0.055
LIKELIHOOD RATIO CHISQUARE         9.970    DF=    1  PROB=0.0016
CONTINUITY ADJ. CHI-SQUARE         9.760    DF=    1  PROB=0.0018
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0009
                    (2-TAIL)                          PROB=0.0017
```

Other medications

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985   41
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY SEIZRE25

D1          SEIZRE25

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|YES     |NO      |  TOTAL
---------+--------+--------+--------+
ABSENT   |       4|      20|    1914|   1934
         |       .|     5.0|    -5.0|
         |       .|    0.60|   57.25|  57.85
         |       .|    1.03|   98.97|
         |       .|   76.92|   57.70|
---------+--------+--------+--------+
PRESENT  |       0|       6|    1403|   1409
         |       .|    -5.0|     5.0|
         |       .|    0.18|   41.97|  42.15
         |       .|    0.43|   99.57|
         |       .|   23.08|   42.30|
---------+--------+--------+--------+
TOTAL            .       26     3317     3343
                 .     0.78    99.22   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         3.906    DF=    1  PROB=0.0480
PHI                                0.034
CONTINGENCY COEFFICIENT            0.034
CRAMER'S V                         0.034
LIKELIHOOD RATIO CHISQUARE         4.199    DF=    1  PROB=0.0405
CONTINUITY ADJ. CHI-SQUARE         3.160    DF=    1  PROB=0.0755
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0347
                    (2-TAIL)                          PROB=0.0706
```

Seizures

Same incidence

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985   42
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY DIZZY25

D1            DIZZY25

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .    |YES      |NO       |   TOTAL
---------+-----------+---------+---------+
ABSENT   |          4|      103|     1831|    1934
         |          .|     23.7|    -23.7|
         |          .|     3.08|    54.77|   57.85
         |          .|     5.33|    94.67|
         |          .|    75.18|    57.11|
---------+-----------+---------+---------+
PRESENT  |          0|       34|     1375|    1409
         |          .|    -23.7|     23.7|
         |          .|     1.02|    41.13|   42.15
         |          .|     2.41|    97.59|
         |          .|    24.82|    42.89|
---------+-----------+---------+---------+
TOTAL               .       137      3206      3343
                    .      4.10     95.90    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          17.986     DF=   1  PROB=0.0001
PHI                                  0.073
CONTINGENCY COEFFICIENT              0.072
CRAMER'S V                           0.073
LIKELIHOOD RATIO CHISQUARE          18.682     DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          16.862     DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0000
                    (2-TAIL)                            PROB=0.0000
```

Dizziness

slightly higher
by non demented

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985   43
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY DCOLOR25

D1            DCOLOR25

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .    |YES      |NO       |   TOTAL
---------+-----------+---------+---------+
ABSENT   |          4|      136|     1798|    1934
         |          .|     20.3|    -20.3|
         |          .|     4.07|    53.78|   57.85
         |          .|     7.03|    92.97|
         |          .|    68.00|    57.21|
---------+-----------+---------+---------+
PRESENT  |          0|       64|     1345|    1409
         |          .|    -20.3|     20.3|
         |          .|     1.91|    40.23|   42.15
         |          .|     4.54|    95.46|
         |          .|    32.00|    42.79|
---------+-----------+---------+---------+
TOTAL               .       200      3143      3343
                    .      5.98     94.02    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           8.984     DF=   1  PROB=0.0027
PHI                                  0.052
CONTINGENCY COEFFICIENT              0.052
CRAMER'S V                           0.052
LIKELIHOOD RATIO CHISQUARE           9.239     DF=   1  PROB=0.0024
CONTINUITY ADJ. CHI-SQUARE           8.547     DF=   1  PROB=0.0035
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0015
                    (2-TAIL)                            PROB=0.0031
```

Discoloration of
extremities.

```
SAS                                                                            14:02 TUESDAY, DECEMBER 24, 1985   44
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY NUMBNS26

D1          NUMBNS26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .     |YES     |NO      |  TOTAL
---------+-------------+--------+--------+
ABSENT   |           4 |     54 |   1880 |   1934
         |           . |   20.4 |  -20.4 |
         |           . |   1.62 |  56.24 |  57.85
         |           . |   2.79 |  97.21 |
         |           . |  93.10 |  57.23 |
---------+-------------+--------+--------+
PRESENT  |           0 |      4 |   1405 |   1409
         |           . |  -20.4 |   20.4 |
         |           . |   0.12 |  42.03 |  42.15
         |           . |   0.28 |  99.72 |
         |           . |   6.90 |  42.77 |
---------+-------------+--------+--------+
TOTAL                . |     58 |   3285 |   3343
                     . |   1.73 |  98.27 | 100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          30.080   DF=   1  PROB=0.0001
PHI                                  0.095
CONTINGENCY COEFFICIENT              0.094
CRAMER'S V                           0.095
LIKELIHOOD RATIO CHISQUARE          37.428   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          28.627   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Numbness of extremities.
higher in non-demented group

```
SAS                                                                            14:02 TUESDAY, DECEMBER 24, 1985   45
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY EDEMA26

D1          EDEMA26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .     |YES     |NO      |  TOTAL
---------+-------------+--------+--------+
ABSENT   |           4 |    317 |   1617 |   1934
         |           . |   26.6 |  -26.6 |
         |           . |   9.48 |  48.37 |  57.86
         |           . |  16.39 |  83.61 |
         |           . |  63.15 |  56.92 |
---------+-------------+--------+--------+
PRESENT  |           0 |    185 |   1224 |   1409
         |           . |  -26.6 |   26.6 |
         |           . |   5.53 |  36.61 |  42.15
         |           . |  13.13 |  86.87 |
         |           . |  36.85 |  43.08 |
---------+-------------+--------+--------+
TOTAL                . |    502 |   2841 |   3343
                     . |  15.02 |  84.98 | 100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           6.793   DF=   1  PROB=0.0092
PHI                                  0.045
CONTINGENCY COEFFICIENT              0.045
CRAMER'S V                           0.045
LIKELIHOOD RATIO CHISQUARE           6.869   DF=   1  PROB=0.0088
CONTINUITY ADJ. CHI-SQUARE           6.539   DF=   1  PROB=0.0105
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0051
                    (2-TAIL)                          PROB=0.0094
```

Edema
higher in non-demented group

```
SAS                                                                14:02 TUESDAY, DECEMBER 24, 1985   46
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY HIPRE26

D1          HIPRE26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |     .    |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        8 |    141 |   1791 |   1932
         |        . |   21.3 |  -21.3 |
         |        . |   4.22 |  53.61 |  57.83
         |        . |   7.30 |  92.70 |
         |        . |  68.12 |  57.15 |
---------+----------+--------+--------+
PRESENT  |        0 |     66 |   1343 |   1409
         |        . |  -21.3 |   21.3 |
         |        . |   1.98 |  40.20 |  42.17
         |        . |   4.68 |  95.32 |
         |        . |  31.88 |  42.85 |
---------+----------+--------+--------+
TOTAL             .      207     3134     3341
                  .     6.20    93.80   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          9.579   DF=   1  PROB=0.0020
PHI                                 0.054
CONTINGENCY COEFFICIENT             0.053
CRAMER'S V                          0.054
LIKELIHOOD RATIO CHISQUARE          9.858   DF=   1  PROB=0.0017
CONTINUITY ADJ. CHI-SQUARE          9.135   DF=   1  PROB=0.0025
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0011
                    (2-TAIL)                         PROB=0.0022
```

High Blood pressure
higher incidence
in non demented

```
SAS                                                                14:02 TUESDAY, DECEMBER 24, 1985   47
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY WTLOSS26

D1          WTLOSS26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |     .    |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |       99 |    235 |   1604 |   1839
         |        . |  -15.7 |   15.7 |
         |        . |   7.26 |  49.58 |  56.85
         |        . |  12.78 |  87.22 |
         |        . |  53.29 |  57.41 |
---------+----------+--------+--------+
PRESENT  |       13 |    206 |   1190 |   1396
         |        . |   15.7 |  -15.7 |
         |        . |   6.37 |  36.79 |  43.15
         |        . |  14.76 |  85.24 |
         |        . |  46.71 |  42.59 |
---------+----------+--------+--------+
TOTAL             .      441     2794     3235
                  .    13.63    86.37   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          2.636   DF=   1  PROB=0.1044
PHI                                -0.029
CONTINGENCY COEFFICIENT             0.029
CRAMER'S V                          0.029
LIKELIHOOD RATIO CHISQUARE          2.624   DF=   1  PROB=0.1053
CONTINUITY ADJ. CHI-SQUARE          2.471   DF=   1  PROB=0.1160
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0582
                    (2-TAIL)                         PROB=0.1089
```

Weight Loss
same in both.

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985   48
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY PAIN2S

D1            PAIN2S

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .    |YES      |NO       |  TOTAL
---------+-----------+---------+---------+
ABSENT   |          4|     203 |    1731 |   1934
         |          .|    49.7 |   -49.7 |
         |          .|    6.07 |   51.78 |  57.85
         |          .|   10.50 |   89.50 |
         |          .|   76.60 |   56.24 |
---------+-----------+---------+---------+
PRESENT  |          0|      62 |    1347 |   1409
         |          .|   -49.7 |    49.7 |
         |          .|    1.85 |   40.29 |  42.15
         |          .|    4.40 |   95.60 |
         |          .|   23.40 |   43.76 |
---------+-----------+---------+---------+
TOTAL               .      265      3078     3343
                    .     7.93     92.07   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        41.504   DF=   1   PROB=0.0001
PHI                                0.111
CONTINGENCY COEFFICIENT            0.111
CRAMER'S V                         0.111
LIKELIHOOD RATIO CHISQUARE        44.278   DF=   1   PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        40.673   DF=   1   PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0000
                    (2-TAIL)                         PROB=0.0000
```

Severe Pain
Higher incidence
in non demented
group

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985   49
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY DEHYDR2S

D1            DEHYDR2S

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .    |YES      |NO       |  TOTAL
---------+-----------+---------+---------+
ABSENT   |          4|      23 |    1911 |   1934
         |          .|    -3.0 |     3.0 |
         |          .|    0.69 |   57.16 |  57.85
         |          .|    1.19 |   98.81 |
         |          .|   51.11 |   57.94 |
---------+-----------+---------+---------+
PRESENT  |          0|      22 |    1387 |   1409
         |          .|     3.0 |    -3.0 |
         |          .|    0.66 |   41.49 |  42.15
         |          .|    1.56 |   98.44 |
         |          .|   48.89 |   42.06 |
---------+-----------+---------+---------+
TOTAL               .       45      3298     3343
                    .     1.35     98.65   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         0.850   DF=   1   PROB=0.3566
PHI                               -0.016
CONTINGENCY COEFFICIENT            0.016
CRAMER'S V                         0.016
LIKELIHOOD RATIO CHISQUARE         0.841   DF=   1   PROB=0.3592
CONTINUITY ADJ. CHI-SQUARE         0.593   DF=   1   PROB=0.4413
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.2199
                    (2-TAIL)                         PROB=0.3566
```

Dehydration
Same in both

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985   50
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY CNTRAC2S

D1            CNTRAC2S

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .  |YES     |NO      |  TOTAL
---------+--------+--------+--------+
ABSENT   |       4 |    408 |   1526 |   1934
         |       . |  -27.0 |   27.0 |
         |       . |  12.20 |  45.65 |  57.85
         |       . |  21.10 |  78.90 |
         |       . |  54.26 |  58.90 |
---------+--------+--------+--------+
PRESENT  |       0 |    344 |   1065 |   1409
         |       . |   27.0 |  -27.0 |
         |       . |  10.29 |  31.86 |  42.15
         |       . |  24.41 |  75.59 |
         |       . |  45.74 |  41.10 |
---------+--------+--------+--------+
TOTAL            .      752     2591     3343
                 .    22.49    77.51   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         5.148   DF=   1  PROB=0.0233
PHI                               -0.039
CONTINGENCY COEFFICIENT            0.039
CRAMER'S V                         0.039
LIKELIHOOD RATIO CHISQUARE         5.124   DF=   1  PROB=0.0236
CONTINUITY ADJ. CHI-SQUARE         4.960   DF=   1  PROB=0.0259
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0131
                    (2-TAIL)                        PROB=0.0236
```

Contractures

slightly higher incidence in demented group

Rensselaer Polytechnic Institute

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SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985   51
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY DYSPNA2S

D1            DYSPNA2S

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .  |YES     |NO      |  TOTAL
---------+--------+--------+--------+
ABSENT   |      99 |    106 |   1733 |   1839
         |       . |   19.0 |  -19.0 |
         |       . |   3.28 |  53.57 |  56.85
         |       . |   5.76 |  94.24 |
         |       . |  69.28 |  56.23 |
---------+--------+--------+--------+
PRESENT  |      13 |     47 |   1349 |   1396
         |       . |  -19.0 |   19.0 |
         |       . |   1.45 |  41.70 |  43.15
         |       . |   3.37 |  96.63 |
         |       . |  30.72 |  43.77 |
---------+--------+--------+--------+
TOTAL            .      153     3082     3235
                 .     4.73    95.27   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        10.121   DF=   1  PROB=0.0015
PHI                                0.056
CONTINGENCY COEFFICIENT            0.056
CRAMER'S V                         0.056
LIKELIHOOD RATIO CHISQUARE        10.485   DF=   1  PROB=0.0012
CONTINUITY ADJ. CHI-SQUARE         9.596   DF=   1  PROB=0.0019
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0006
                    (2-TAIL)                        PROB=0.0014
```

Dyspnea

slightly higher in non-demented.

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985   52
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY BLEEDG26

D1              BLEEDG26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .  |YES     |NO      |  TOTAL
---------+--------+--------+--------+
ABSENT   |      99 |      54 |    1785 |   1839
         |       . |     2.3 |    -2.3 |
         |       . |    1.67 |   55.18 |  56.85
         |       . |    2.94 |   97.06 |
         |       . |   59.34 |   56.77 |
---------+--------+--------+--------+
PRESENT  |      13 |      37 |    1359 |   1396
         |       . |    -2.3 |     2.3 |
         |       . |    1.14 |   42.01 |  43.15
         |       . |    2.65 |   97.35 |
         |       . |   40.66 |   43.23 |
---------+--------+--------+--------+
TOTAL            .        91      3144     3235
                 .      2.81     97.19   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        0.237    DF=   1  PROB=0.6261
PHI                               0.009
CONTINGENCY COEFFICIENT           0.009
CRAMER'S V                        0.009
LIKELIHOOD RATIO CHISQUARE        0.239    DF=   1  PROB=0.6253
CONTINUITY ADJ. CHI-SQUARE        0.144    DF=   1  PROB=0.7041
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.3538
                    (2-TAIL)                        PROB=0.6686
```

Bleeding
same in both
groups

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985   53
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ULCER26

D1              ULCER26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .  |YES     |NO      |  TOTAL
---------+--------+--------+--------+
ABSENT   |      99 |      27 |    1812 |   1839
         |       . |     3.7 |    -3.7 |
         |       . |    0.83 |   56.01 |  56.85
         |       . |    1.47 |   98.53 |
         |       . |   65.85 |   56.73 |
---------+--------+--------+--------+
PRESENT  |      13 |      14 |    1382 |   1396
         |       . |    -3.7 |     3.7 |
         |       . |    0.43 |   42.72 |  43.15
         |       . |    1.00 |   99.00 |
         |       . |   34.15 |   43.27 |
---------+--------+--------+--------+
TOTAL            .        41      3194     3235
                 .      1.27     98.73   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        1.373    DF=   1  PROB=0.2413
PHI                               0.021
CONTINGENCY COEFFICIENT           0.021
CRAMER'S V                        0.021
LIKELIHOOD RATIO CHISQUARE        1.406    DF=   1  PROB=0.2360
CONTINUITY ADJ. CHI-SQUARE        1.027    DF=   1  PROB=0.3110
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.1554
                    (2-TAIL)                        PROB=0.2883
```

Stasis Ulcer
same in both

```
SAS                                                                14:02 TUESDAY, DECEMBER 24, 1985   54
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY FALLS26

D1            FALLS26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .   |YES      |NO       |  TOTAL
---------+----------+---------+---------+
ABSENT   |      100 |      16 |    1822 |   1838
         |        . |    -0.5 |     0.5 |
         |        . |    0.49 |   56.36 |  56.85
         |        . |    0.87 |   99.13 |
         |        . |   55.17 |   56.87 |
---------+----------+---------+---------+
PRESENT  |       14 |      13 |    1382 |   1395
         |        . |     0.5 |    -0.5 |
         |        . |    0.40 |   42.75 |  43.15
         |        . |    0.93 |   99.07 |
         |        . |   44.83 |   43.13 |
---------+----------+---------+---------+
TOTAL             .        29      3204     3233
                  .      0.90     99.10   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           0.034   DF=   1  PROB=0.8546
PHI                                 -0.003
CONTINGENCY COEFFICIENT              0.003
CRAMER'S V                           0.003
LIKELIHOOD RATIO CHISQUARE           0.034   DF=   1  PROB=0.8547
CONTINUITY ADJ. CHI-SQUARE           0.000   DF=   1  PROB=0.9980
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.4986
                    (2-TAIL)                          PROB=0.8530
```

Frequent Falls
same in both
groups

```
SAS                                                                14:02 TUESDAY, DECEMBER 24, 1985   55
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY MED_PBLM

D1            MED_PBLM

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |        |        |        |        |4 OR MOR|
         |0       |1       |2       |3       |E       |  TOTAL
---------+--------+--------+--------+--------+--------+
ABSENT   |    780 |    558 |    322 |    181 |     97 |   1938
         |   -9.8 |  -32.0 |   -4.0 |   29.3 |   16.5 |
         |  23.30 |  16.67 |   9.62 |   5.41 |   2.90 |  57.90
         |  40.25 |  28.79 |  16.62 |   9.34 |   5.01 |
         |  57.18 |  54.76 |  57.19 |  69.08 |  69.78 |
---------+--------+--------+--------+--------+--------+
PRESENT  |    584 |    461 |    241 |     81 |     42 |   1409
         |    9.8 |   32.0 |    4.0 |  -29.3 |  -16.5 |
         |  17.45 |  13.77 |   7.20 |   2.42 |   1.25 |  42.10
         |  41.45 |  32.72 |  17.10 |   5.75 |   2.98 |
         |  42.82 |  45.24 |  42.81 |  30.92 |  30.22 |
---------+--------+--------+--------+--------+--------+
TOTAL        1364     1019      563      262      139     3347
            40.75    30.45    16.82     7.83     4.15   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          26.023   DF=   4  PROB=0.0001
PHI                                  0.088
CONTINGENCY COEFFICIENT              0.088
CRAMER'S V                           0.088
LIKELIHOOD RATIO CHISQUARE          26.766   DF=   4  PROB=0.0001
```

Number of Medical
Problems.

Same in both
groups.

```
SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985   56
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY MOBILE27

D1          MOBILE27

FREQUENCY|
DEVIATION|
PERCENT  |
ROW PCT  |
COL PCT  |       1|       2|       3|       4|       5|       6|       7|       8|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |     481|     223|     109|     142|     391|     368|     209|      15|   1938
         |    59.5|    14.5|     4.8|   -21.9|    72.0|   -52.4|   -71.8|    -4.7|
         |   14.37|    6.66|    3.26|    4.24|   11.68|   10.99|    6.24|    0.45|  57.90
         |   24.82|   11.51|    5.62|    7.33|   20.18|   18.99|   10.78|    0.77|
         |   66.07|   61.94|   60.56|   50.18|   70.96|   50.69|   43.09|   44.12|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |     247|     137|      71|     141|     160|     358|     276|      19|   1409
         |   -59.5|   -14.5|    -4.8|    21.9|   -72.0|    52.4|    71.8|     4.7|
         |    7.38|    4.09|    2.12|    4.21|    4.78|   10.70|    8.25|    0.57|  42.10
         |   17.53|    9.72|    5.04|   10.01|   11.36|   25.41|   19.59|    1.35|
         |   33.93|   38.06|   39.44|   49.82|   29.04|   49.31|   56.91|   55.88|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL         728      360      180      283      551      726      485       34     3347
            21.75    10.76     5.38     8.46    16.46    21.69    14.49     1.02   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                   130.134    DF=   7   PROB=0.0001
PHI                            0.197
CONTINGENCY COEFFICIENT        0.193
CRAMER'S V                     0.197
LIKELIHOOD RATIO CHISQUARE   131.232    DF=   7   PROB=0.0001
```

Indep. Walks

Min. Sup.

Cont. Sup.

Human Asst

Wheels Indep.

Is wheeled

Chairfast

Bedfast

Mobility

Demented Group generally more impaired w.r.t. mobility

```
SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985   57
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY TRNSFR28

D1          TRNSFR28

FREQUENCY|
DEVIATION|
PERCENT  |
ROW PCT  |
COL PCT  |       .|       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |       1|     668|     224|     137|     408|     490|      10|   1937
         |       .|    96.0|    19.6|    -1.4|   -30.8|   -77.9|    -5.6|
         |       .|   19.96|    6.69|    4.09|   12.19|   14.64|    0.30|  57.89
         |       .|   34.49|   11.56|    7.07|   21.06|   25.30|    0.52|
         |       .|   67.61|   63.46|   57.32|   53.83|   49.95|   37.04|
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |       0|     320|     129|     102|     350|     491|      17|   1409
         |       .|   -96.0|   -19.6|     1.4|    30.8|    77.9|     5.6|
         |       .|    9.56|    3.86|    3.05|   10.46|   14.67|    0.51|  42.11
         |       .|   22.71|    9.16|    7.24|   24.84|   34.85|    1.21|
         |       .|   32.39|   36.54|   42.68|   46.17|   50.05|   62.96|
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           .      988      353      239      758      981       27     3346
                .    29.53    10.55     7.14    22.65    29.32     0.81   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    78.148    DF=   5   PROB=0.0001
PHI                            0.153
CONTINGENCY COEFFICIENT        0.151
CRAMER'S V                     0.153
LIKELIHOOD RATIO CHISQUARE    78.884    DF=   5   PROB=0.0001
```

Indep.

Min Asst.

Cont. Super.

Cont. Asst.

Two Assts.

Bedfast

Transfer.

Demented group generally more impaired w.r.t. Transfer.

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985   58
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY EATING29

D1          EATING29

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|  TOTAL
---------+--------+--------+--------+--------+--------+
ABSENT   |    556 |    866 |    214 |    257 |     46 |   1938
         |  124.0 |   57.3 |  -68.0 | -106.6 |   -6.7 |
         |  16.61 |  25.84 |   6.39 |   7.68 |   1.37 |  57.90
         |  28.69 |  44.63 |  11.04 |  13.26 |   2.37 |
         |  74.53 |  62.01 |  43.94 |  40.92 |  50.55 |
---------+--------+--------+--------+--------+--------+
PRESENT  |    190 |    530 |    273 |    371 |     45 |   1409
         | -124.0 |  -57.3 |   68.0 |  106.6 |    6.7 |
         |   5.68 |  15.84 |   8.16 |  11.08 |   1.34 |  42.10
         |  13.48 |  37.62 |  19.38 |  26.33 |   3.19 |
         |  25.47 |  37.98 |  56.06 |  59.08 |  49.45 |
---------+--------+--------+--------+--------+--------+
TOTAL         746     1396      487      628       91     3347
            22.29    41.68    14.55    18.76     2.72   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       208.490   DF=   4  PROB=0.0001
PHI                                0.250
CONTINGENCY COEFFICIENT            0.243
CRAMER'S V                         0.250
LIKELIHOOD RATIO CHISQUARE       212.833   DF=   4  PROB=0.0001
```

Indep
Min Asst
Cont. Super.
Hand Fed
Tube Fed

Eating

Demented group generally more impaired w.r.t. Eating.

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985   59
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY DRESS030

D1          DRESS030

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |    359 |    407 |    137 |    287 |    678 |     70 |   1938
         |  102.5 |   84.5 |    6.1 |   25.9 | -212.0 |   -7.0 |
         |  10.73 |  12.16 |   4.09 |   8.57 |  20.26 |   2.09 |  57.90
         |  18.52 |  21.00 |   7.07 |  14.81 |  34.98 |   3.61 |
         |  81.04 |  73.07 |  60.62 |  63.64 |  44.11 |  52.63 |
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |     84 |    150 |     89 |    164 |    859 |     63 |   1409
         | -102.5 |  -84.5 |   -6.1 |  -25.9 |  212.0 |    7.0 |
         |   2.51 |   4.48 |   2.66 |   4.90 |  25.66 |   1.88 |  42.10
         |   5.96 |  10.65 |   6.32 |  11.64 |  60.97 |   4.47 |
         |  18.96 |  26.93 |  39.38 |  36.36 |  55.89 |  47.37 |
---------+--------+--------+--------+--------+--------+--------+
TOTAL         443      557      226      451     1537      133     3347
            13.24    16.64     6.75    13.47    45.92     3.97   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       278.051   DF=   5  PROB=0.0001
PHI                                0.288
CONTINGENCY COEFFICIENT            0.277
CRAMER'S V                         0.288
LIKELIHOOD RATIO CHISQUARE       289.040   DF=   5  PROB=0.0001
```

Indep
Min Asst
Cont Super
Cont Asst
Total Asst.
Not Dressed

Dressing.

Demented group generally more impaired w.r.t. Dressing.

```
SAS                                                              14:02 TUESDAY, DECEMBER 24, 1985   60
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY BATHS31

D1          BATHS31

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |       1|      66|     450|     169|     407|     845|   1937
         |       .|    22.6|   114.2|    24.3|    55.6|  -216.7|
         |       .|    1.97|   13.45|    5.05|   12.16|   25.25|  57.89
         |       .|    3.41|   23.23|    8.72|   21.01|   43.62|
         |       .|   88.00|   77.59|   67.60|   67.05|   46.07|
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |       0|       9|     130|      81|     200|     989|   1409
         |       .|   -22.6|  -114.2|   -24.3|   -55.6|   216.7|
         |       .|    0.27|    3.89|    2.42|    5.98|   29.56|  42.11
         |       .|    0.64|    9.23|    5.75|   14.19|   70.19|
         |       .|   12.00|   22.41|   32.40|   32.95|   53.93|
---------+--------+--------+--------+--------+--------+--------+
TOTAL            .       75      580      250      607     1834     3346
                 .     2.24    17.33     7.47    18.14    54.81   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    255.797    DF=    4  PROB=0.0001
PHI                             0.276
CONTINGENCY COEFFICIENT         0.266
CRAMER'S V                      0.276
LIKELIHOOD RATIO CHISQUARE    257.061    DF=    4  PROB=0.0001
```

Indep.
Min Super
Cont. Super
Cont. Asst
Total Asst

Bathing

Demented group generally more impaired. ~~Both~~ Both groups experience high assistance with this ADL which is viewed as a policy of facilities rather than a need of the patients.

```
SAS                                                              14:02 TUESDAY, DECEMBER 24, 1985   61
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY TOILET32

D1          TOILET32

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      1|      2|      3|      4|      5|      6|      7|  TOTAL
---------+-------+-------+-------+-------+-------+-------+-------+
ABSENT   |    669|    244|     42|    252|    185|    302|    244|   1938
         |  137.5|   36.7|    3.2|   24.4|  -20.6|  -84.8|  -96.5|
         |  19.99|   7.29|   1.25|   7.53|   5.53|   9.02|   7.29|  57.90
         |  34.52|  12.59|   2.17|  13.00|   9.55|  15.58|  12.59|
         |  72.88|  68.16|  62.69|  64.12|  52.11|  45.21|  41.50|
---------+-------+-------+-------+-------+-------+-------+-------+
PRESENT  |    249|    114|     25|    141|    170|    366|    344|   1409
         | -137.5|  -36.7|   -3.2|  -24.4|   20.6|   84.8|   96.5|
         |   7.44|   3.41|   0.75|   4.21|   5.08|  10.94|  10.28|  42.10
         |  17.67|   8.09|   1.77|  10.01|  12.07|  25.98|  24.41|
         |  27.12|  31.84|  37.31|  35.88|  47.89|  54.79|  58.50|
---------+-------+-------+-------+-------+-------+-------+-------+
TOTAL         918     358      67     393     355     668     588     3347
            27.43   10.70    2.00   11.74   10.61   19.96   17.57   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    220.704    DF=    6  PROB=0.0001
PHI                             0.257
CONTINGENCY COEFFICIENT         0.249
CRAMER'S V                      0.257
LIKELIHOOD RATIO CHISQUARE    223.844    DF=    6  PROB=0.0001
```

Indep
Min Super
Cont. Super
Cont. Asst
Total Asst
Incontinent Toileted
Incontinent Not Toileted

Toileting

Demented group generally more impaired Very high incidence of Incontinence.

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985   62
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY BLADDR33

D1           BLADDR33

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |    978 |    208 |    565 |      5 |    137 |     45 |   1938
         |  213.1 |    6.5 | -232.3 |    0.4 |    2.1 |   10.3 |
         |  29.22 |   6.21 |  16.88 |   0.15 |   4.09 |   1.34 |  57.90
         |  50.46 |  10.73 |  29.15 |   0.26 |   7.07 |   2.32 |
         |  74.03 |  59.77 |  41.03 |  62.50 |  58.80 |  75.00 |
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |    343 |    140 |    812 |      3 |     96 |     15 |   1409
         | -213.1 |   -6.5 |  232.3 |   -0.4 |   -2.1 |  -10.3 |
         |  10.25 |   4.18 |  24.26 |   0.09 |   2.87 |   0.45 |  42.10
         |  24.34 |   9.94 |  57.63 |   0.21 |   6.81 |   1.06 |
         |  25.97 |  40.23 |  58.97 |  37.50 |  41.20 |  25.00 |
---------+--------+--------+--------+--------+--------+--------+
TOTAL       1321      348     1377        8      233       60     3347
           39.47    10.40    41.14     0.24     6.96     1.79   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    309.676   DF=   5  PROB=0.0001
PHI                             0.304
CONTINGENCY COEFFICIENT         0.291
CRAMER'S V                      0.304
LIKELIHOOD RATIO CHISQUARE    315.866   DF=   5  PROB=0.0001
```

Continent

Occas. Incont.

Freq. Incont

Catheter Self care

Catheter

External Catheter

Bladder Control

Demented group generally Incontinent

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985   63
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY BOWEL34

D1           BOWEL34

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|  TOTAL
---------+--------+--------+--------+--------+--------+
ABSENT   |   1138 |    231 |    548 |      3 |     18 |   1938
         |  232.4 |    2.3 | -235.4 |    0.1 |    0.6 |
         |  34.00 |   6.90 |  16.37 |   0.09 |   0.54 |  57.90
         |  58.72 |  11.92 |  28.28 |   0.15 |   0.93 |
         |  72.76 |  58.48 |  40.50 |  60.00 |  60.00 |
---------+--------+--------+--------+--------+--------+
PRESENT  |    426 |    164 |    805 |      2 |     12 |   1409
         | -232.4 |   -2.3 |  235.4 |   -0.1 |   -0.6 |
         |  12.73 |   4.90 |  24.05 |   0.06 |   0.36 |  42.10
         |  30.23 |  11.64 |  57.13 |   0.14 |   0.85 |
         |  27.24 |  41.52 |  59.50 |  40.00 |  40.00 |
---------+--------+--------+--------+--------+--------+
TOTAL       1564      395     1353        5       30     3347
           46.73    11.80    40.42     0.15     0.90   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    309.845   DF=   4  PROB=0.0001
PHI                             0.304
CONTINGENCY COEFFICIENT         0.291
CRAMER'S V                      0.304
LIKELIHOOD RATIO CHISQUARE    314.358   DF=   4  PROB=0.0001
```

Continent

Occas Incontinent

Freq Incontinence

Ostomy self care

Ostomy

Bowel Control

Demented group generally incontinent

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  64
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY HYGIEN36

D1        HYGIEN36

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       0|       1|       2|       3|       4|       5|       7|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      1 |    358 |    470 |    127 |    303 |    679 |      0 |   1938
         |    0.4 |  120.0 |   95.9 |   -2.1 |   25.6 | -239.3 |   -0.6 |
         |   0.03 |  10.70 |  14.04 |   3.79 |   9.05 |  20.29 |   0.00 |  57.90
         |   0.05 |  18.47 |  24.25 |   6.55 |  15.63 |  35.04 |   0.00 |
         | 100.00 |  87.10 |  72.76 |  56.95 |  63.26 |  42.81 |   0.00 |
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      0 |     53 |    176 |     96 |    176 |    907 |      1 |   1409
         |   -0.4 | -120.0 |  -95.9 |    2.1 |  -25.6 |  239.3 |    0.6 |
         |   0.00 |   1.58 |   5.26 |   2.87 |   5.26 |  27.10 |   0.03 |  42.10
         |   0.00 |   3.76 |  12.49 |   6.81 |  12.49 |  64.37 |   0.07 |
         |   0.00 |  12.90 |  27.24 |  43.05 |  36.74 |  57.19 | 100.00 |
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           1      411      646      223      479     1586        1     3347
             0.03    12.28    19.30     6.66    14.31    47.39     0.03   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                      358.238   DF=   6  PROB=0.0001
PHI                               0.327
CONTINGENCY COEFFICIENT           0.311
CRAMER'S V                        0.327
LIKELIHOOD RATIO CHISQUARE      382.762   DF=   6  PROB=0.0001
```

Indep.

Min Sup.

One to One Guidance

Cont. Asst.

Total Asst.

Personal Hygiene

Demented group generally needs total assistance

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  65
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY LEARN36

D1        LEARN36

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       0|       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      1 |    896 |    554 |    257 |    149 |     80 |      1 |   1938
         |    0.4 |  295.0 |   24.2 | -115.9 | -177.6 |  -26.5 |    0.4 |
         |   0.03 |  26.77 |  16.55 |   7.68 |   4.45 |   2.39 |   0.03 |  57.90
         |   0.05 |  46.23 |  28.59 |  13.26 |   7.69 |   4.13 |   0.05 |
         | 100.00 |  86.32 |  60.55 |  39.91 |  26.42 |  43.48 | 100.00 |
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      0 |    142 |    361 |    387 |    415 |    104 |      0 |   1409
         |   -0.4 | -295.0 |  -24.2 |  115.9 |  177.6 |   26.5 |   -0.4 |
         |   0.00 |   4.24 |  10.79 |  11.56 |  12.40 |   3.11 |   0.00 |  42.10
         |   0.00 |  10.08 |  25.62 |  27.47 |  29.45 |   7.38 |   0.00 |
         |   0.00 |  13.68 |  39.45 |  60.09 |  73.58 |  56.52 |   0.00 |
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           1     1038      915      644      564      184        1     3347
             0.03    31.01    27.34    19.24    16.85     5.50     0.03   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                      678.581   DF=   6  PROB=0.0001
PHI                               0.450
CONTINGENCY COEFFICIENT           0.411
CRAMER'S V                        0.450
LIKELIHOOD RATIO CHISQUARE      730.379   DF=   6  PROB=0.0001
```

Listens Retains

Difficulties

Cannot Comprehend

Cannot Comprehend

Cannot Determine

Learning Abilities

Demented group generally cannot comprehend and are not given instructions.

Very judgemental question

High / Moderate / Minimal / Poor / None / Cannot Determine

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  66
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY MOTIVE37

D1          MOTIVE37

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |       1|     373|     558|     348|     268|     341|      49|   1937
         |       .|   119.9|   142.2|    -3.5|    25.9|  -281.5|    -3.1|
         |       .|   11.15|   16.68|   10.40|    8.01|   10.19|    1.46|  57.91
         |       .|   19.26|   28.81|   17.97|   13.84|   17.60|    2.53|
         |       .|   85.35|   77.72|   57.33|   64.11|   31.72|   54.44|
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |       1|      64|     160|     259|     150|     734|      41|   1408
         |       .|  -119.9|  -142.2|     3.5|   -25.9|   281.5|     3.1|
         |       .|    1.91|    4.78|    7.74|    4.48|   21.94|    1.23|  42.09
         |       .|    4.55|   11.36|   18.39|   10.65|   52.13|    2.91|
         |       .|   14.65|   22.28|   42.67|   35.89|   68.28|   45.56|
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL            .      437      718      607      418     1075       90     3345
                 .    13.06    21.46    18.15    12.50    32.14     2.69   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      560.207     DF=    5  PROB=0.0001
PHI                               0.409
CONTINGENCY COEFFICIENT           0.379
CRAMER'S V                        0.409
LIKELIHOOD RATIO CHISQUARE      585.996     DF=    5  PROB=0.0001
```

Motivation:

Demented group generally unmotivated

Very judgemental question,
not auditable

Does not / Wanders on floor / Wanders in facility / Cannot get back / Wanders outside / Wanders In or out of Facility

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  67
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY WANDER38

D1          WANDER38

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |    1842|      65|      15|       9|       5|       2|   1938
         |    89.9|   -58.9|    -5.8|   -17.1|    -7.7|    -0.3|
         |   55.03|    1.94|    0.45|    0.27|    0.15|    0.06|  57.90
         |   95.05|    3.35|    0.77|    0.46|    0.26|    0.10|
         |   60.87|   30.37|   41.67|   20.00|   22.73|   50.00|
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |    1184|     149|      21|      36|      17|       2|   1409
         |   -89.9|    58.9|     5.8|    17.1|     7.7|     0.3|
         |   35.37|    4.45|    0.63|    1.08|    0.51|    0.06|  42.10
         |   84.03|   10.57|    1.49|    2.56|    1.21|    0.14|
         |   39.13|   69.63|   58.33|   80.00|   77.27|   50.00|
---------+--------+--------+--------+--------+--------+--------+
TOTAL         3026      214       36       45       22        4     3347
             90.41     6.39     1.08     1.34     0.66     0.12   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      119.186     DF=    5  PROB=0.0001
PHI                               0.189
CONTINGENCY COEFFICIENT           0.185
CRAMER'S V                        0.189
LIKELIHOOD RATIO CHISQUARE      119.413     DF=    5  PROB=0.0001
```

Wandering

Demented group has slightly greater problem with wandering, generally though, not severe.

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY VABUSE39

D1          VABUSE39

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|       8|       9|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |    1365|     198|     126|      60|      54|      59|      62|      13|       1|   1938
         |   106.2|    -5.2|   -48.3|   -10.1|   -23.6|   -45.8|    23.8|     2.6|     0.4|
         |   40.78|    5.92|    3.76|    1.79|    1.61|    1.76|    1.85|    0.39|    0.03|  57.90
         |   70.43|   10.22|    6.50|    3.10|    2.79|    3.04|    3.20|    0.67|    0.05|
         |   62.79|   56.41|   41.86|   49.59|   40.30|   32.60|   93.94|   72.22|  100.00|
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |     809|     153|     175|      61|      80|     122|       4|       5|       0|   1409
         |  -106.2|     5.2|    48.3|    10.1|    23.6|    45.8|   -23.8|    -2.6|    -0.4|
         |   24.17|    4.57|    5.23|    1.82|    2.39|    3.65|    0.12|    0.15|    0.00|  42.10
         |   57.42|   10.86|   12.42|    4.33|    5.68|    8.66|    0.28|    0.35|    0.00|
         |   37.21|   43.59|   58.14|   50.41|   59.70|   67.40|    6.06|   27.78|    0.00|
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL        2174      351      301      121      134      181       66       18        1     3347
            64.95    10.49     8.99     3.62     4.00     5.41     1.97     0.54     0.03   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    158.807   DF=   8  PROB=0.0001
PHI                             0.218
CONTINGENCY COEFFICIENT         0.213
CRAMER'S V                      0.218
LIKELIHOOD RATIO CHISQUARE    167.490   DF=   8  PROB=0.0001
```

None
Occasional
Predictable
Short lived
Recurring
Daily
None or Occasional
Unpredictable Short lived
Predictable Nightly

Verbal Abuse

Demented group has slightly greater incidence of Verbal Abuse, generally though, not severe.

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY AGRESS40

D1          AGRESS40

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|       8|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |    1603|      98|     101|      15|      24|      10|      81|       6|   1938
         |   122.4|   -31.1|   -77.3|    -5.8|   -23.5|   -16.1|    31.2|     0.2|
         |   47.89|    2.93|    3.02|    0.45|    0.72|    0.30|    2.42|    0.18|  57.90
         |   82.71|    5.06|    5.21|    0.77|    1.24|    0.52|    4.18|    0.31|
         |   62.69|   43.95|   32.79|   41.67|   29.27|   22.22|   94.19|   60.00|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |     954|     125|     207|      21|      58|      35|       5|       4|   1409
         |  -122.4|    31.1|    77.3|     5.8|    23.5|    16.1|   -31.2|    -0.2|
         |   28.50|    3.73|    6.18|    0.63|    1.73|    1.05|    0.15|    0.12|  42.10
         |   67.71|    8.87|   14.69|    1.49|    4.12|    2.48|    0.35|    0.28|
         |   37.31|   56.05|   67.21|   58.33|   70.73|   77.78|    5.81|   40.00|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL        2557      223      308       36       82       45       86       10     3347
            76.40     6.66     9.20     1.08     2.45     1.34     2.57     0.30   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    222.984   DF=   7  PROB=0.0001
PHI                             0.258
CONTINGENCY COEFFICIENT         0.250
CRAMER'S V                      0.258
LIKELIHOOD RATIO CHISQUARE    234.812   DF=   7  PROB=0.0001
```

None
Minor Occasional
Predictable
Occasional Extreme
Recurring not daily
Daily Recurring
Not or Occasional Minor
Unpredictable Extreme.

Physical Aggression

Demented group has slightly greater incidence, generally though, not severe

```
SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985   70
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY SFCARE41

D1          SFCARE41

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       0|       1|       2|       3|       4|       5|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |       1|    1068|     246|      68|     154|     401|   1938
         |     0.4|   288.1|    29.4|   -10.7|    -1.2|  -308.0|
         |    0.03|   31.91|    7.35|    2.03|    4.60|   11.98|  57.90
         |    0.05|   55.11|   12.69|    3.51|    7.95|   20.69|
         |  100.00|   79.29|   65.78|   50.00|   57.46|   32.84|
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |       0|     279|     128|      68|     114|     820|   1409
         |    -0.4|  -288.1|   -29.4|    10.7|     1.2|   308.0|
         |    0.00|    8.34|    3.82|    2.03|    3.41|   24.50|  42.10
         |    0.00|   19.80|    9.08|    4.83|    8.09|   58.20|
         |    0.00|   20.71|   34.22|   50.00|   42.54|   67.16|
---------+--------+--------+--------+--------+--------+--------+
TOTAL           1     1347      374      136      268     1221     3347
             0.03    40.24    11.17     4.06     8.01    36.48   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    581.044   DF=   5  PROB=0.0001
PHI                             0.417
CONTINGENCY COEFFICIENT         0.385
CRAMER'S V                      0.417
LIKELIHOOD RATIO CHISQUARE    601.101   DF=   5  PROB=0.0001
```

Performs Routine

Performs but not fully

Resists Assistance

Refuses to Perform

Unable mentally

Refused to Care for Oneself

Demented group is generally unable mentally to perform.

Non demented group also has high incidence on unable mentally to perform.

" Highly judgemental question. Response 5, "unable mentally", may have also been used as "unable physically".

```
SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985   71
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY REGRES42

D1          REGRES42

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |       1|    1464|     263|      90|      64|      51|       5|   1937
         |       .|   198.5|   -73.3|   -19.4|   -43.7|   -61.3|    -0.8|
         |       .|   43.75|    7.86|    2.69|    1.91|    1.52|    0.15|  57.89
         |       .|   75.58|   13.58|    4.65|    3.30|    2.63|    0.26|
         |       .|   66.97|   45.27|   47.62|   34.41|   26.29|   50.00|
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |       0|     722|     318|      99|     122|     143|       5|   1409
         |       .|  -198.5|    73.3|    19.4|    43.7|    61.3|     0.8|
         |       .|   21.58|    9.50|    2.96|    3.65|    4.27|    0.15|  42.11
         |       .|   51.24|   22.57|    7.03|    8.66|   10.15|    0.35|
         |       .|   33.03|   54.73|   52.38|   65.59|   73.71|   50.00|
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           .     2186      581      189      186      194       10     3346
                .    65.33    17.36     5.65     5.56     5.80     0.30   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    241.914   DF=   5  PROB=0.0001
PHI                             0.269
CONTINGENCY COEFFICIENT         0.260
CRAMER'S V                      0.269
LIKELIHOOD RATIO CHISQUARE    242.731   DF=   5  PROB=0.0001
```

None

Non disruptive

Occasional

Frequent

Daily

Frequent or More Often

Regressive Behavior.

Generally, both groups do not display regressive behavior. Demented group does have greater impairment, but usually non disruptive.

```
SAS                                                                14:02 TUESDAY, DECEMBER 24, 1985   72
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY DEPRES43

D1          DEPRES43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |   .     |YES     |NO      |  TOTAL
---------+---------+--------+--------+
ABSENT   |       1 |    147 |   1790 |   1937
         |       . |    4.6 |   -4.6 |
         |       . |   4.39 |  53.50 |  57.89
         |       . |   7.59 |  92.41 |
         |       . |  59.76 |  57.74 |
---------+---------+--------+--------+
PRESENT  |       0 |     99 |   1310 |   1409
         |       . |   -4.6 |    4.6 |
         |       . |   2.96 |  39.15 |  42.11
         |       . |   7.03 |  92.97 |
         |       . |  40.24 |  42.26 |
---------+---------+--------+--------+
TOTAL            .      246     3100     3346
                 .     7.35    92.65   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        0.379   DF=   1  PROB=0.5380
PHI                               0.011
CONTINGENCY COEFFICIENT           0.011
CRAMER'S V                        0.011
LIKELIHOOD RATIO CHISQUARE        0.381   DF=   1  PROB=0.5372
CONTINUITY ADJ. CHI-SQUARE        0.301   DF=   1  PROB=0.5832
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.2923
                    (2-TAIL)                       PROB=0.5469
```

Severly depressed

Both the same

```
SAS                                                                14:02 TUESDAY, DECEMBER 24, 1985   73
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY HALLUC43

D1          HALLUC43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |   .     |YES     |NO      |  TOTAL
---------+---------+--------+--------+
ABSENT   |       1 |     80 |   1857 |   1937
         |       . |  -39.8 |   39.8 |
         |       . |   2.39 |  55.50 |  57.89
         |       . |   4.13 |  95.87 |
         |       . |  38.65 |  59.16 |
---------+---------+--------+--------+
PRESENT  |       0 |    127 |   1282 |   1409
         |       . |   39.8 |  -39.8 |
         |       . |   3.80 |  38.31 |  42.11
         |       . |   9.01 |  90.99 |
         |       . |  61.35 |  40.84 |
---------+---------+--------+--------+
TOTAL            .      207     3139     3346
                 .     6.19    93.81   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       33.516   DF=   1  PROB=0.0001
PHI                              -0.100
CONTINGENCY COEFFICIENT           0.100
CRAMER'S V                        0.100
LIKELIHOOD RATIO CHISQUARE       33.022   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       32.679   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0000
                    (2-TAIL)                       PROB=0.0000
```

Hallucinates

Hallucinations more frequent in demented group.

```
SAS                                                              14:02 TUESDAY, DECEMBER 24, 1985   74
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY PARANO43

D1            PARANO43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .      |YES      |NO       |  TOTAL
---------+-----------+---------+---------+
ABSENT   |          1|      119|     1818|   1937
         |          .|    -29.2|     29.2|
         |          .|     3.56|    54.33|  57.89
         |          .|     6.14|    93.86|
         |          .|    46.48|    58.83|
---------+-----------+---------+---------+
PRESENT  |          0|      137|     1272|   1409
         |          .|     29.2|    -29.2|
         |          .|     4.09|    38.02|  42.11
         |          .|     9.72|    90.28|
         |          .|    53.52|    41.17|
---------+-----------+---------+---------+
TOTAL               .       256      3090     3346
                    .      7.65     92.35   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        14.793     DF=    1   PROB=0.0001
PHI                               -0.066
CONTINGENCY COEFFICIENT            0.066
CRAMER'S V                         0.066
LIKELIHOOD RATIO CHISQUARE        14.586     DF=    1   PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        14.281     DF=    1   PROB=0.0002
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0001
                    (2-TAIL)                            PROB=0.0002
```

Severly paranoid

Demented group slightly greater incidences of paranoia.

```
SAS                                                              14:02 TUESDAY, DECEMBER 24, 1985   75
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY WDRAWN43

D1            WDRAWN43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .      |YES      |NO       |  TOTAL
---------+-----------+---------+---------+
ABSENT   |          1|      523|     1414|   1937
         |          .|    -98.7|     98.7|
         |          .|    15.63|    42.26|  57.89
         |          .|    27.00|    73.00|
         |          .|    48.70|    62.24|
---------+-----------+---------+---------+
PRESENT  |          0|      551|      858|   1409
         |          .|     98.7|    -98.7|
         |          .|    16.47|    25.64|  42.11
         |          .|    39.11|    60.89|
         |          .|    51.30|    37.76|
---------+-----------+---------+---------+
TOTAL               .      1074      2272     3346
                    .     32.10     67.90   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        54.840     DF=    1   PROB=0.0001
PHI                               -0.128
CONTINGENCY COEFFICIENT            0.127
CRAMER'S V                         0.128
LIKELIHOOD RATIO CHISQUARE        54.517     DF=    1   PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        54.286     DF=    1   PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0000
                    (2-TAIL)                            PROB=0.0000
```

Withdrawn

Demented groups more withdrawn

```
SAS                                                                            14:02 TUESDAY, DECEMBER 24, 1985   76
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY DELUSN43

D1          DELUSN43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .    |YES     |NO      |  TOTAL
---------+-----------+--------+--------+
ABSENT   |         1 |     69 |   1868 |   1937
         |         . |  -17.3 |   17.3 |
         |         . |   2.06 |  55.83 |  57.88
         |         . |   3.56 |  96.44 |
         |         . |  46.31 |  58.43 |
---------+-----------+--------+--------+
PRESENT  |         0 |     80 |   1329 |   1409
         |         . |   17.3 |  -17.3 |
         |         . |   2.39 |  39.72 |  42.11
         |         . |   5.68 |  94.32 |
         |         . |  53.69 |  41.57 |
---------+-----------+--------+--------+
TOTAL              .      149     3197     3346
                   .     4.45    95.55   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        8.580   DF=   1  PROB=0.0034
PHI                              -0.051
CONTINGENCY COEFFICIENT           0.051
CRAMER'S V                        0.051
LIKELIHOOD RATIO CHISQUARE        8.453   DF=   1  PROB=0.0036
CONTINUITY ADJ. CHI-SQUARE        8.000   DF=   1  PROB=0.0046
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0024
                    (2-TAIL)                       PROB=0.0038
```

Delusions:

Demented group slightly greater incidence of delusions.

```
SAS                                                                            14:02 TUESDAY, DECEMBER 24, 1985   77
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY HOARDS43

D1          HOARDS43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .    |YES     |NO      |  TOTAL
---------+-----------+--------+--------+
ABSENT   |         2 |    105 |   1831 |   1936
         |         . |   -5.5 |    5.5 |
         |         . |   3.14 |  54.74 |  57.88
         |         . |   5.42 |  94.58 |
         |         . |  54.97 |  58.05 |
---------+-----------+--------+--------+
PRESENT  |         0 |     86 |   1323 |   1409
         |         . |    5.5 |   -5.5 |
         |         . |   2.57 |  39.56 |  42.12
         |         . |   6.10 |  93.90 |
         |         . |  45.03 |  41.95 |
---------+-----------+--------+--------+
TOTAL              .      191     3154     3346
                   .     5.71    94.29   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        0.701   DF=   1  PROB=0.4025
PHI                              -0.014
CONTINGENCY COEFFICIENT           0.014
CRAMER'S V                        0.014
LIKELIHOOD RATIO CHISQUARE        0.697   DF=   1  PROB=0.4039
CONTINUITY ADJ. CHI-SQUARE        0.580   DF=   1  PROB=0.4464
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.2228
                    (2-TAIL)                       PROB=0.4074
```

Hoards

Same for both groups

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985   78
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY MANIPU43

D1             MANIPU43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .      |YES      |NO       |   TOTAL
---------+--------------+---------+---------+
ABSENT   |       95     |     280 |    1562 |    1842
         |        .     |    58.1 |   -58.1 |
         |        .     |    8.65 |   48.24 |   56.89
         |        .     |   15.20 |   84.80 |
         |        .     |   71.79 |   54.85 |
---------+--------------+---------+---------+
PRESENT  |       13     |     110 |    1286 |    1396
         |        .     |   -58.1 |    58.1 |
         |        .     |    3.40 |   39.72 |   43.11
         |        .     |    7.88 |   92.12 |
         |        .     |   28.21 |   45.15 |
---------+--------------+---------+---------+
TOTAL             .          390      2848      3238
                  .        12.04     87.96    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          40.189     DF=    1  PROB=0.0001
PHI                                  0.111
CONTINGENCY COEFFICIENT              0.111
CRAMER'S V                           0.111
LIKELIHOOD RATIO CHISQUARE          41.610     DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          39.492     DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                             PROB=0.0000
                    (2-TAIL)                             PROB=0.0000
```

Manipulative

Non demented group
more manipulative.

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985   79
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY BOWL146A

D1             BOWL146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT   |PRESENT  |   TOTAL
---------+---------+---------+
ABSENT   |    1436 |     502 |    1938
         |    59.1 |   -59.1 |
         |   42.90 |   15.00 |   57.90
         |   74.10 |   25.90 |
         |   60.39 |   51.81 |
---------+---------+---------+
PRESENT  |     942 |     467 |    1409
         |   -59.1 |    59.1 |
         |   28.14 |   13.95 |   42.10
         |   66.86 |   33.14 |
         |   39.61 |   48.19 |
---------+---------+---------+
TOTAL         2378       969      3347
             71.05     28.95    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          20.797     DF=    1  PROB=0.0001
PHI                                  0.079
CONTINGENCY COEFFICIENT              0.079
CRAMER'S V                           0.079
LIKELIHOOD RATIO CHISQUARE          20.677     DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          20.446     DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                             PROB=0.0000
                    (2-TAIL)                             PROB=0.0000
```

Bowel Program

greater use of.
bowel programming
by demented

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985   80
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY DECU146A

D1           DECU146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1758 |    180 |   1938
         |   12.2 |  -12.2 |
         |  52.52 |   5.38 |  57.90
         |  90.71 |   9.29 |
         |  58.31 |  54.22 |
---------+--------+--------+
PRESENT  |   1257 |    152 |   1409
         |  -12.2 |   12.2 |
         |  37.56 |   4.54 |  42.10
         |  89.21 |  10.79 |
         |  41.69 |  45.78 |
---------+--------+--------+
TOTAL        3015      332     3347
            90.08     9.92   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        2.054    DF=   1  PROB=0.1518
PHI                               0.025
CONTINGENCY COEFFICIENT           0.025
CRAMER'S V                        0.025
LIKELIHOOD RATIO CHISQUARE        2.041    DF=   1  PROB=0.1531
CONTINUITY ADJ. CHI-SQUARE        1.880    DF=   1  PROB=0.1693
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0849
                    (2-TAIL)                        PROB=0.1600
```

Decubitus Care

Same

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985   81
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY IMPN146A

D1           IMPN146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1799 |    139 |   1938
         |   12.7 |  -12.7 |
         |  53.75 |   4.15 |  57.90
         |  92.83 |   7.17 |
         |  58.31 |  53.05 |
---------+--------+--------+
PRESENT  |   1286 |    123 |   1409
         |  -12.7 |   12.7 |
         |  38.42 |   3.67 |  42.10
         |  91.27 |   8.73 |
         |  41.69 |  46.95 |
---------+--------+--------+
TOTAL        3085      262     3347
            92.17     7.83   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        2.742    DF=   1  PROB=0.0977
PHI                               0.029
CONTINGENCY COEFFICIENT           0.029
CRAMER'S V                        0.029
LIKELIHOOD RATIO CHISQUARE        2.720    DF=   1  PROB=0.0991
CONTINUITY ADJ. CHI-SQUARE        2.531    DF=   1  PROB=0.1117
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0563
                    (2-TAIL)                        PROB=0.1033
```

Impaction

Same

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  82
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY LAB146A

D1          LAB146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1727 |    211 |   1938
         |   14.8 |  -14.8 |
         |  51.60 |   6.30 |  57.90
         |  89.11 |  10.89 |
         |  58.40 |  54.10 |
---------+--------+--------+
PRESENT  |   1230 |    179 |   1409
         |  -14.8 |   14.8 |
         |  36.75 |   5.35 |  42.10
         |  87.30 |  12.70 |
         |  41.60 |  45.90 |
---------+--------+--------+
TOTAL        2957      390     3347
            88.35    11.65   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        2.616   DF=   1  PROB=0.1058
PHI                               0.028
CONTINGENCY COEFFICIENT           0.028
CRAMER'S V                        0.028
LIKELIHOOD RATIO CHISQUARE        2.599   DF=   1  PROB=0.1069
CONTINUITY ADJ. CHI-SQUARE        2.442   DF=   1  PROB=0.1182
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0594
                    (2-TAIL)                       PROB=0.1136
```

Lab Tests.

Same.

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  83
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY OXYG146A

D1          OXYG146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1907 |     31 |   1938
         |   -6.7 |    6.7 |
         |  56.98 |   0.93 |  57.90
         |  98.40 |   1.60 |
         |  57.70 |  73.81 |
---------+--------+--------+
PRESENT  |   1398 |     11 |   1409
         |    6.7 |   -6.7 |
         |  41.77 |   0.33 |  42.10
         |  99.22 |   0.78 |
         |  42.30 |  26.19 |
---------+--------+--------+
TOTAL        3305       42     3347
            98.75     1.25   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        4.416   DF=   1  PROB=0.0356
PHI                              -0.036
CONTINGENCY COEFFICIENT           0.036
CRAMER'S V                        0.036
LIKELIHOOD RATIO CHISQUARE        4.663   DF=   1  PROB=0.0308
CONTINUITY ADJ. CHI-SQUARE        3.779   DF=   1  PROB=0.0519
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0239
                    (2-TAIL)                       PROB=0.0404
```

Oxygen Therapy

Same

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985   84
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY PAIN14GA

D1          PAIN14GA

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1799 |    139 |   1938
         |  -30.7 |   30.7 |
         |  53.75 |   4.15 |  57.90
         |  92.83 |   7.17 |
         |  56.93 |  74.33 |
---------+--------+--------+
PRESENT  |   1361 |     48 |   1409
         |   30.7 |  -30.7 |
         |  40.66 |   1.43 |  42.10
         |  96.59 |   3.41 |
         |  43.07 |  25.67 |
---------+--------+--------+
TOTAL        3160      187     3347
            94.41     5.59   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        21.932    DF=   1  PROB=0.0001
PHI                               -0.081
CONTINGENCY COEFFICIENT            0.081
CRAMER'S V                         0.081
LIKELIHOOD RATIO CHISQUARE        23.166    DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        21.224    DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0000
                    (2-TAIL)                           PROB=0.0000
```

Pain Control

More use by
non demented.

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985   85
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ROM14GA

D1          ROM14GA

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1086 |    852 |   1938
         |   60.0 |  -60.0 |
         |  32.45 |  25.46 |  57.90
         |  56.04 |  43.96 |
         |  61.29 |  54.10 |
---------+--------+--------+
PRESENT  |    686 |    723 |   1409
         |  -60.0 |   60.0 |
         |  20.50 |  21.60 |  42.10
         |  48.69 |  51.31 |
         |  38.71 |  45.90 |
---------+--------+--------+
TOTAL        1772     1575     3347
            52.94    47.06   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        17.692    DF=   1  PROB=0.0001
PHI                                0.073
CONTINGENCY COEFFICIENT            0.073
CRAMER'S V                         0.073
LIKELIHOOD RATIO CHISQUARE        17.693    DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        17.398    DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0000
                    (2-TAIL)                           PROB=0.0000
```

Range of Motion

Greater use by
demented

```
SAS                                                                 14:02 TUESDAY, DECEMBER 24, 1985  86
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY REAL148A

D1          REAL148A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1494 |    444 |   1938
         |   97.4 |  -97.4 |
         |  44.64 |  13.27 |  57.90
         |  77.09 |  22.91 |
         |  61.94 |  47.49 |
---------+--------+--------+
PRESENT  |    918 |    491 |   1409
         |  -97.4 |   97.4 |
         |  27.43 |  14.67 |  42.10
         |  65.15 |  34.85 |
         |  38.06 |  52.51 |
---------+--------+--------+
TOTAL        2412      935     3347
            72.06    27.94   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                             57.748   DF=   1  PROB=0.0001
PHI                                     0.131
CONTINGENCY COEFFICIENT                 0.130
CRAMER'S V                              0.131
LIKELIHOOD RATIO CHISQUARE             57.233   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE             57.166   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                             PROB=0.0000
                    (2-TAIL)                             PROB=0.0000
```

Reality Orientation.

greater use by demented group.

Relatively High use by non demented as well.

```
SAS                                                                 14:02 TUESDAY, DECEMBER 24, 1985  87
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY STIM148A

D1          STIM148A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1690 |    248 |   1938
         |   61.8 |  -61.8 |
         |  50.49 |   7.41 |  57.90
         |  87.20 |  12.80 |
         |  60.10 |  46.36 |
---------+--------+--------+
PRESENT  |   1122 |    287 |   1409
         |  -61.8 |   61.8 |
         |  33.52 |   8.57 |  42.10
         |  79.63 |  20.37 |
         |  39.90 |  53.64 |
---------+--------+--------+
TOTAL        2812      535     3347
            84.02    15.98   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                             34.836   DF=   1  PROB=0.0001
PHI                                     0.102
CONTINGENCY COEFFICIENT                 0.101
CRAMER'S V                              0.102
LIKELIHOOD RATIO CHISQUARE             34.409   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE             34.273   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                             PROB=0.0000
                    (2-TAIL)                             PROB=0.0000
```

Sensory Stimulation.

Higher use by demented group.

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1986   88
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY SKIN146A

D1          SKIN146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |    892 |   1046 |   1938
         |  103.9 | -103.9 |
         |  26.65 |  31.25 |  57.90
         |  46.03 |  53.97 |
         |  65.54 |  52.67 |
---------+--------+--------+
PRESENT  |    469 |    940 |   1409
         | -103.9 |  103.9 |
         |  14.01 |  28.08 |  42.10
         |  33.29 |  66.71 |
         |  34.46 |  47.33 |
---------+--------+--------+
TOTAL        1361     1986     3347
            40.66    59.34   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        54.888    DF=   1  PROB=0.0001
PHI                                0.128
CONTINGENCY COEFFICIENT            0.127
CRAMER'S V                         0.128
LIKELIHOOD RATIO CHISQUARE        55.371    DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        54.361    DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0000
                    (2-TAIL)                         PROB=0.0000
```

Skin Care

Slightly greater use by demented group.

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1986   89
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY SPLN146A

D1          SPLN146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1833 |    105 |   1938
         |   -3.7 |    3.7 |
         |  54.77 |   3.14 |  57.90
         |  94.58 |   5.42 |
         |  57.79 |  60.00 |
---------+--------+--------+
PRESENT  |   1339 |     70 |   1409
         |    3.7 |   -3.7 |
         |  40.01 |   2.09 |  42.10
         |  95.03 |   4.97 |
         |  42.21 |  40.00 |
---------+--------+--------+
TOTAL        3172      175     3347
            94.77     5.23   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         0.333    DF=   1  PROB=0.5638
PHI                               -0.010
CONTINGENCY COEFFICIENT            0.010
CRAMER'S V                         0.010
LIKELIHOOD RATIO CHISQUARE         0.335    DF=   1  PROB=0.5629
CONTINUITY ADJ. CHI-SQUARE         0.249    DF=   1  PROB=0.6180
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.3101
                    (2-TAIL)                         PROB=0.5828
```

Splint Assistance

same

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985   90
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY STER146A

D1          STER146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1785 |    153 |   1938
         |   -6.5 |    6.5 |
         |  53.33 |   4.57 |  57.90
         |  92.11 |   7.89 |
         |  57.69 |  60.47 |
---------+--------+--------+
PRESENT  |   1309 |    100 |   1409
         |    6.5 |   -6.5 |
         |  39.11 |   2.99 |  42.10
         |  92.90 |   7.10 |
         |  42.31 |  39.53 |
---------+--------+--------+
TOTAL        3094      253     3347
            92.44     7.56   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           0.743    DF=    1  PROB=0.3888
PHI                                 -0.015
CONTINGENCY COEFFICIENT              0.015
CRAMER'S V                           0.015
LIKELIHOOD RATIO CHISQUARE           0.747    DF=    1  PROB=0.3875
CONTINUITY ADJ. CHI-SQUARE           0.633    DF=    1  PROB=0.4253
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.2135
                    (2-TAIL)                            PROB=0.4269
```

Sterile Dressing

Same

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985   91
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY AMBU146A

D1          AMBU146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1647 |    291 |   1938
         |   16.5 |  -16.5 |
         |  49.21 |   8.69 |  57.90
         |  84.98 |  15.02 |
         |  58.49 |  54.80 |
---------+--------+--------+
PRESENT  |   1169 |    240 |   1409
         |  -16.5 |   16.5 |
         |  34.93 |   7.17 |  42.10
         |  82.97 |  17.03 |
         |  41.51 |  45.20 |
---------+--------+--------+
TOTAL        2816      531     3347
            84.14    15.86   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           2.489    DF=    1  PROB=0.1147
PHI                                  0.027
CONTINGENCY COEFFICIENT              0.027
CRAMER'S V                           0.027
LIKELIHOOD RATIO CHISQUARE           2.477    DF=    1  PROB=0.1156
CONTINUITY ADJ. CHI-SQUARE           2.340    DF=    1  PROB=0.1261
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0633
                    (2-TAIL)                            PROB=0.1252
```

Ambulation Training'

Same

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985   92
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY BOBL146A

D1          BOBL146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1840 |     98 |   1938
         |    5.1 |   -5.1 |
         |  54.97 |   2.93 |  57.90
         |  94.94 |   5.06 |
         |  58.06 |  55.06 |
---------+--------+--------+
PRESENT  |   1329 |     80 |   1409
         |   -5.1 |    5.1 |
         |  39.71 |   2.39 |  42.10
         |  94.32 |   5.68 |
         |  41.94 |  44.94 |
---------+--------+--------+
TOTAL        3169      178     3347
            94.68     5.32   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        0.626   DF=   1  PROB=0.4292
PHI                               0.014
CONTINGENCY COEFFICIENT           0.014
CRAMER'S V                        0.014
LIKELIHOOD RATIO CHISQUARE        0.622   DF=   1  PROB=0.4305
CONTINUITY ADJ. CHI-SQUARE        0.506   DF=   1  PROB=0.4762
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.2376
                    (2-TAIL)                       PROB=0.4362
```

Bowel & Bladder Training.

same

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985   93
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY DRES146A

D1          DRES146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1850 |     88 |   1938
         |  -20.3 |   20.3 |
         |  55.27 |   2.63 |  57.90
         |  95.46 |   4.54 |
         |  57.28 |  75.21 |
---------+--------+--------+
PRESENT  |   1380 |     29 |   1409
         |   20.3 |  -20.3 |
         |  41.23 |   0.87 |  42.10
         |  97.94 |   2.06 |
         |  42.72 |  24.79 |
---------+--------+--------+
TOTAL        3230      117     3347
            96.50     3.50   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       14.906   DF=   1  PROB=0.0001
PHI                              -0.067
CONTINGENCY COEFFICIENT           0.067
CRAMER'S V                        0.067
LIKELIHOOD RATIO CHISQUARE       16.835   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       14.178   DF=   1  PROB=0.0002
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0001
                    (2-TAIL)                       PROB=0.0001
```

Dressing and Grooming Training.

[illegible]

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985   94
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ADL146A

D1          ADL146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1890 |     48 |   1938
         |  -16.2 |   16.2 |
         |  56.47 |   1.43 |  57.90
         |  97.52 |   2.48 |
         |  57.41 |  87.27 |
---------+--------+--------+
PRESENT  |   1402 |      7 |   1409
         |   16.2 |  -16.2 |
         |  41.89 |   0.21 |  42.10
         |  99.50 |   0.50 |
         |  42.59 |  12.73 |
---------+--------+--------+
TOTAL        3292       55     3347
            98.36     1.64   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      19.789   DF=   1  PROB=0.0001
PHI                             -0.077
CONTINGENCY COEFFICIENT          0.077
CRAMER'S V                       0.077
LIKELIHOOD RATIO CHISQUARE      22.984   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE      18.583   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0000
                    (2-TAIL)                      PROB=0.0000
```

Instrumental ADL
Training:
Very low use
overall

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985   95
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY MEAL146A

D1          MEAL146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1884 |     54 |   1938
         |  -10.6 |   10.6 |
         |  56.29 |   1.61 |  57.90
         |  97.21 |   2.79 |
         |  57.58 |  72.00 |
---------+--------+--------+
PRESENT  |   1388 |     21 |   1409
         |   10.6 |  -10.6 |
         |  41.47 |   0.63 |  42.10
         |  98.51 |   1.49 |
         |  42.42 |  28.00 |
---------+--------+--------+
TOTAL        3272       75     3347
            97.76     2.24   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       6.255   DF=   1  PROB=0.0124
PHI                             -0.043
CONTINGENCY COEFFICIENT          0.043
CRAMER'S V                       0.043
LIKELIHOOD RATIO CHISQUARE       6.547   DF=   1  PROB=0.0105
CONTINUITY ADJ. CHI-SQUARE       5.677   DF=   1  PROB=0.0172
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0076
                    (2-TAIL)                      PROB=0.0128
```

Meal Training:
Very low
use overall

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  96
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY TRFR146A

D1          TRFR146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT   |PRESENT  |   TOTAL
---------+---------+---------+
ABSENT   |   1720  |    218  |    1938
         |  -35.0  |   35.0  |
         |  51.39  |   6.51  |   57.90
         |  88.75  |  11.25  |
         |  56.75  |  68.99  |
---------+---------+---------+
PRESENT  |   1311  |     98  |    1409
         |   35.0  |  -35.0  |
         |  39.17  |   2.93  |   42.10
         |  93.04  |   6.96  |
         |  43.25  |  31.01  |
---------+---------+---------+
TOTAL        3031       316      3347
            90.56      9.44    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          17.590   DF=   1  PROB=0.0001
PHI                                 -0.072
CONTINGENCY COEFFICIENT              0.072
CRAMER'S V                           0.072
LIKELIHOOD RATIO CHISQUARE          18.131   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          17.091   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Transfer Training.

Greater use by non demented groups.

Rensselaer Polytechnic Institute

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  97
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY TURN146A

D1          TURN146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT   |PRESENT  |   TOTAL
---------+---------+---------+
ABSENT   |   1260  |    678  |    1938
         |   81.1  |  -81.1  |
         |  37.65  |  20.26  |   57.90
         |  65.02  |  34.98  |
         |  61.89  |  51.72  |
---------+---------+---------+
PRESENT  |    776  |    633  |    1409
         |  -81.1  |   81.1  |
         |  23.18  |  18.91  |   42.10
         |  55.07  |  44.93  |
         |  38.11  |  48.28  |
---------+---------+---------+
TOTAL        2036      1311      3347
            60.83     39.17    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          33.837   DF=   1  PROB=0.0001
PHI                                  0.101
CONTINGENCY COEFFICIENT              0.100
CRAMER'S V                           0.101
LIKELIHOOD RATIO CHISQUARE          33.750   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          33.421   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Turning & Positioning.

Higher Use by demented; generally high use overall.

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985   98
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY WUND146A

D1          WUND146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1764 |    174 |   1938
         |   -6.1 |    6.1 |
         |  52.70 |   5.20 |  57.90
         |  91.02 |   8.98 |
         |  57.70 |  60.00 |
---------+--------+--------+
PRESENT  |   1293 |    116 |   1409
         |    6.1 |   -6.1 |
         |  38.63 |   3.47 |  42.10
         |  91.77 |   8.23 |
         |  42.30 |  40.00 |
---------+--------+--------+
TOTAL        3067      290     3347
            91.34     8.66   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          0.573    DF=   1  PROB=0.4491
PHI                                -0.013
CONTINGENCY COEFFICIENT             0.013
CRAMER'S V                          0.013
LIKELIHOOD RATIO CHISQUARE          0.576    DF=   1  PROB=0.4481
CONTINUITY ADJ. CHI-SQUARE          0.483    DF=   1  PROB=0.4872
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.2441
                    (2-TAIL)                          PROB=0.4660
```

Wound /Lesion Care

Same.

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985   99
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY OGEN146A

D1          OGEN146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1626 |    312 |   1938
         |  -43.9 |   43.9 |
         |  48.58 |   9.32 |  57.90
         |  83.90 |  16.10 |
         |  56.38 |  67.39 |
---------+--------+--------+
PRESENT  |   1258 |    151 |   1409
         |   43.9 |  -43.9 |
         |  37.59 |   4.51 |  42.10
         |  89.28 |  10.72 |
         |  43.62 |  32.61 |
---------+--------+--------+
TOTAL        2884      463     3347
            86.17    13.83   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         19.828    DF=   1  PROB=0.0001
PHI                                -0.077
CONTINGENCY COEFFICIENT             0.077
CRAMER'S V                          0.077
LIKELIHOOD RATIO CHISQUARE         20.296    DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE         19.379    DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Other General Treatments

Higher use by
non demented.

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  100
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY CHEM1468

D1          CHEM1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1928 |     10 |   1938
         |   -3.6 |    3.6 |
         |  57.60 |   0.30 |  57.90
         |  99.48 |   0.52 |
         |  57.79 |  90.91 |
---------+--------+--------+
PRESENT  |   1408 |      1 |   1409
         |    3.6 |   -3.6 |
         |  42.07 |   0.03 |  42.10
         |  99.93 |   0.07 |
         |  42.21 |   9.09 |
---------+--------+--------+
TOTAL        3336       11     3347
            99.67     0.33   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                       4.933   DF=   1  PROB=0.0264
PHI                             -0.038
CONTINGENCY COEFFICIENT          0.038
CRAMER'S V                       0.038
LIKELIHOOD RATIO CHISQUARE       5.973   DF=   1  PROB=0.0145
CONTINUITY ADJ. CHI-SQUARE       3.368   DF=   1  PROB=0.0665
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0219
                    (2-TAIL)                      PROB=0.0307
```

Chemotherapy

Very low use overall

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  101
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY DOSE1468

D1          DOSE1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1834 |    104 |   1938
         |  -16.6 |   16.6 |
         |  54.80 |   3.11 |  57.90
         |  94.63 |   5.37 |
         |  57.38 |  68.87 |
---------+--------+--------+
PRESENT  |   1362 |     47 |   1409
         |   16.6 |  -16.6 |
         |  40.69 |   1.40 |  42.10
         |  96.66 |   3.34 |
         |  42.62 |  31.13 |
---------+--------+--------+
TOTAL        3196      151     3347
            95.49     4.51   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       7.609   DF=   1  PROB=0.0052
PHI                             -0.048
CONTINGENCY COEFFICIENT          0.048
CRAMER'S V                       0.048
LIKELIHOOD RATIO CHISQUARE       8.061   DF=   1  PROB=0.0045
CONTINUITY ADJ. CHI-SQUARE       7.346   DF=   1  PROB=0.0067
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0030
                    (2-TAIL)                      PROB=0.0063
```

Drug Dose Changes

Slightly higher use by non-demented

```
SAS                                                               14:02 TUESDAY, DECEMBER 24, 1986  102
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY MNTR1468

D1            MNTR1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |   TOTAL
---------+--------+--------+
ABSENT   |   1719 |    219 |   1938
         |   19.0 |  -19.0 |
         |  51.36 |   6.54 |  57.90
         |  88.70 |  11.30 |
         |  58.56 |  53.28 |
---------+--------+--------+
PRESENT  |   1217 |    192 |   1409
         |  -19.0 |   19.0 |
         |  36.36 |   5.74 |  42.10
         |  86.37 |  13.63 |
         |  41.46 |  46.72 |
---------+--------+--------+
TOTAL        2936      411     3347
            87.72    12.28   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          4.099   DF=   1  PROB=0.0429
PHI                                 0.035
CONTINGENCY COEFFICIENT             0.035
CRAMER'S V                          0.035
LIKELIHOOD RATIO CHISQUARE          4.089   DF=   1  PROB=0.0437
CONTINUITY ADJ. CHI-SQUARE          3.886   DF=   1  PROB=0.0487
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0246
                    (2-TAIL)                         PROB=0.0483
```

Medical Condition
Monitoring

same both.

```
SAS                                                               14:02 TUESDAY, DECEMBER 24, 1986  103
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY HOME1468

D1            HOME1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |   TOTAL
---------+--------+--------+
ABSENT   |   1937 |      1 |   1938
         |   -0.4 |    0.4 |
         |  57.87 |   0.03 |  57.90
         |  99.95 |   0.05 |
         |  57.89 | 100.00 |
---------+--------+--------+
PRESENT  |   1409 |      0 |   1409
         |    0.4 |   -0.4 |
         |  42.10 |   0.00 |  42.10
         | 100.00 |   0.00 |
         |  42.11 |   0.00 |
---------+--------+--------+
TOTAL        3346        1     3347
            99.97     0.03   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                          0.727   DF=   1  PROB=0.3938
PHI                                -0.015
CONTINGENCY COEFFICIENT             0.015
CRAMER'S V                          0.015
LIKELIHOOD RATIO CHISQUARE          1.093   DF=   1  PROB=0.2958
CONTINUITY ADJ. CHI-SQUARE          0.025   DF=   1  PROB=0.8728
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.5790
                    (2-TAIL)                         PROB=1.0000
```

Home Visitation.

Very low use

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  104
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ALIM1468

D1          ALIM1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1934 |      4 |   1938
         |    2.4 |   -2.4 |
         |  57.78 |   0.12 |  57.90
         |  99.79 |   0.21 |
         |  57.97 |  36.36 |
---------+--------+--------+
PRESENT  |   1402 |      7 |   1409
         |   -2.4 |    2.4 |
         |  41.89 |   0.21 |  42.10
         |  99.50 |   0.50 |
         |  42.03 |  63.64 |
---------+--------+--------+
TOTAL        3336       11     3347
            99.67     0.33   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                         2.100   DF=   1  PROB=0.1473
PHI                                0.025
CONTINGENCY COEFFICIENT            0.025
CRAMER'S V                         0.025
LIKELIHOOD RATIO CHISQUARE         2.070   DF=   1  PROB=0.1502
CONTINUITY ADJ. CHI-SQUARE         1.307   DF=   1  PROB=0.2529
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.1270
                    (2-TAIL)                        PROB=0.2200
```

Hyperalimentation

very low use

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  105
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY SINJ1468

D1          SINJ1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1809 |    129 |   1938
         |    0.7 |   -0.7 |
         |  54.05 |   3.85 |  57.90
         |  93.34 |   6.66 |
         |  57.93 |  57.59 |
---------+--------+--------+
PRESENT  |   1314 |     95 |   1409
         |   -0.7 |    0.7 |
         |  39.26 |   2.84 |  42.10
         |  93.26 |   6.74 |
         |  42.07 |  42.41 |
---------+--------+--------+
TOTAL        3123      224     3347
            93.31     6.69   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         0.010   DF=   1  PROB=0.9217
PHI                                0.002
CONTINGENCY COEFFICIENT            0.002
CRAMER'S V                         0.002
LIKELIHOOD RATIO CHISQUARE         0.010   DF=   1  PROB=0.9217
CONTINUITY ADJ. CHI-SQUARE         0.001   DF=   1  PROB=0.9774
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.4874
                    (2-TAIL)                        PROB=0.9442
```

Injection, Single

same use

69

```
SAS                                                               14:02 TUESDAY, DECEMBER 24, 1985  106
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY MINJ1468

D1            MINJ1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1861 |     77 |   1938
         |   -7.5 |    7.5 |
         |  55.60 |   2.30 |  57.90
         |  96.03 |   3.97 |
         |  57.67 |  64.17 |
---------+--------+--------+
PRESENT  |   1366 |     43 |   1409
         |    7.5 |   -7.5 |
         |  40.81 |   1.28 |  42.10
         |  96.95 |   3.05 |
         |  42.33 |  35.83 |
---------+--------+--------+
TOTAL        3227      120     3347
            96.41     3.59   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                            2.004   DF=   1  PROB=0.1568
PHI                                  -0.024
CONTINGENCY COEFFICIENT               0.024
CRAMER'S V                            0.024
LIKELIHOOD RATIO CHISQUARE            2.036   DF=   1  PROB=0.1536
CONTINUITY ADJ. CHI-SQUARE            1.746   DF=   1  PROB=0.1864
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0925
                    (2-TAIL)                           PROB=0.1872
```

Multiple Injection

Same.

```
SAS                                                               14:02 TUESDAY, DECEMBER 24, 1985  107
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY IOFL1468

D1            IOFL1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1769 |    169 |   1938
         |   20.9 |  -20.9 |
         |  52.85 |   5.05 |  57.90
         |  91.28 |   8.72 |
         |  58.60 |  51.52 |
---------+--------+--------+
PRESENT  |   1250 |    159 |   1409
         |  -20.9 |   20.9 |
         |  37.35 |   4.75 |  42.10
         |  88.72 |  11.28 |
         |  41.40 |  48.48 |
---------+--------+--------+
TOTAL        3019      328     3347
            90.20     9.80   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                            6.069   DF=   1  PROB=0.0138
PHI                                   0.043
CONTINGENCY COEFFICIENT               0.043
CRAMER'S V                            0.043
LIKELIHOOD RATIO CHISQUARE            6.010   DF=   1  PROB=0.0142
CONTINUITY ADJ. CHI-SQUARE            5.782   DF=   1  PROB=0.0162
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0083
                    (2-TAIL)                           PROB=0.0157
```

Fluid Intake Output

Slightly higher use

by demented group

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  108
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY NGFD1468

D1          NGFD1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1905 |     33 |   1938
         |    5.8 |   -5.8 |
         |  56.92 |   0.99 |  57.90
         |  98.30 |   1.70 |
         |  58.08 |  49.25 |
---------+--------+--------+
PRESENT  |   1375 |     34 |   1409
         |   -5.8 |    5.8 |
         |  41.08 |   1.02 |  42.10
         |  97.59 |   2.41 |
         |  41.92 |  50.75 |
---------+--------+--------+
TOTAL        3280       67     3347
            98.00     2.00   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          2.098   DF=   1  PROB=0.1475
PHI                                 0.025
CONTINGENCY COEFFICIENT             0.025
CRAMER'S V                          0.025
LIKELIHOOD RATIO CHISQUARE          2.071   DF=   1  PROB=0.1502
CONTINUITY ADJ. CHI-SQUARE          1.752   DF=   1  PROB=0.1857
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0934
                    (2-TAIL)                         PROB=0.1591
```

Nasal Gastric Feeding.

same ō [illegible]

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  109
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY PRTL1468

D1          PRTL1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1924 |     14 |   1938
         |    1.6 |   -1.6 |
         |  57.48 |   0.42 |  57.90
         |  99.28 |   0.72 |
         |  57.95 |  51.85 |
---------+--------+--------+
PRESENT  |   1396 |     13 |   1409
         |   -1.6 |    1.6 |
         |  41.71 |   0.39 |  42.10
         |  99.08 |   0.92 |
         |  42.05 |  48.15 |
---------+--------+--------+
TOTAL        3320       27     3347
            99.19     0.81   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          0.409   DF=   1  PROB=0.5226
PHI                                 0.011
CONTINGENCY COEFFICIENT             0.011
CRAMER'S V                          0.011
LIKELIHOOD RATIO CHISQUARE          0.405   DF=   1  PROB=0.5247
CONTINUITY ADJ. CHI-SQUARE          0.197   DF=   1  PROB=0.6573
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.3250
                    (2-TAIL)                         PROB=0.5805
```

Parenteral Feeding

Same

```
SAS                                                              14:02 TUESDAY, DECEMBER 24, 1996  110
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY RADN1408

D1          RADN1408

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |  TOTAL
---------+--------+
ABSENT   |   1938 |   1938
         |    0.0 |
         |  57.90 |  57.90
         | 100.00 |
         |  57.90 |
---------+--------+
PRESENT  |   1409 |   1409
         |    0.0 |
         |  42.10 |  42.10
         | 100.00 |
         |  42.10 |
---------+--------+
TOTAL        3347     3347
           100.00   100.00
```

Radiation Treatments

no use

```
SAS                                                              14:02 TUESDAY, DECEMBER 24, 1996  111
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY RSPY1408

D1          RSPY1408

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1907 |     31 |   1938
         |   -4.4 |    4.4 |
         |  56.98 |   0.93 |  57.90
         |  98.40 |   1.60 |
         |  57.77 |  67.39 |
---------+--------+--------+
PRESENT  |   1394 |     15 |   1409
         |    4.4 |   -4.4 |
         |  41.65 |   0.45 |  42.10
         |  98.94 |   1.06 |
         |  42.23 |  32.61 |
---------+--------+--------+
TOTAL        3301       46     3347
            98.63     1.37   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       1.723   DF=   1  PROB=0.1893
PHI                             -0.023
CONTINGENCY COEFFICIENT          0.023
CRAMER'S V                       0.023
LIKELIHOOD RATIO CHISQUARE       1.770   DF=   1  PROB=0.1834
CONTINUITY ADJ. CHI-SQUARE       1.351   DF=   1  PROB=0.2452
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.1219
                    (2-TAIL)                      PROB=0.2292
```

Respiratory Care

same

```
SAS                                                                             14:02 TUESDAY, DECEMBER 24, 1985  112
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY SUCT1488

D1           SUCT1488

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1915 |     23 |   1938
         |    2.5 |   -2.5 |
         |  57.22 |   0.69 |  57.90
         |  98.81 |   1.19 |
         |  57.98 |  52.27 |
---------+--------+--------+
PRESENT  |   1388 |     21 |   1409
         |   -2.5 |    2.5 |
         |  41.47 |   0.63 |  42.10
         |  98.51 |   1.49 |
         |  42.02 |  47.73 |
---------+--------+--------+
TOTAL        3303       44     3347
            98.69     1.31   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         0.580    DF=    1  PROB=0.4464
PHI                                0.013
CONTINGENCY COEFFICIENT            0.013
CRAMER'S V                         0.013
LIKELIHOOD RATIO CHISQUARE         0.574    DF=    1  PROB=0.4488
CONTINUITY ADJ. CHI-SQUARE         0.369    DF=    1  PROB=0.5434
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.2703
                    (2-TAIL)                          PROB=0.4470
```

Suctioning

same

```
SAS                                                                             14:02 TUESDAY, DECEMBER 24, 1985  113
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY DSCH1488

D1           DSCH1488

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1900 |     38 |   1938
         |  -13.1 |   13.1 |
         |  56.77 |   1.14 |  57.90
         |  98.04 |   1.96 |
         |  57.51 |  88.37 |
---------+--------+--------+
PRESENT  |   1404 |      5 |   1409
         |   13.1 |  -13.1 |
         |  41.95 |   0.15 |  42.10
         |  99.65 |   0.35 |
         |  42.49 |  11.63 |
---------+--------+--------+
TOTAL        3304       43     3347
            98.72     1.28   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        16.591    DF=    1  PROB=0.0001
PHI                               -0.070
CONTINGENCY COEFFICIENT            0.070
CRAMER'S V                         0.070
LIKELIHOOD RATIO CHISQUARE        19.480    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        15.348    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Teaching for
Discharge

Very low overall

```
SAS                                                                14:02 TUESDAY, DECEMBER 24, 1985  114
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY TRAC1468

D1          TRAC1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1933 |      5 |   1938
         |   -0.9 |    0.9 |
         |  57.75 |   0.15 |  57.90
         |  99.74 |   0.26 |
         |  57.87 |  71.43 |
---------+--------+--------+
PRESENT  |   1407 |      2 |   1409
         |    0.9 |   -0.9 |
         |  42.04 |   0.06 |  42.10
         |  99.86 |   0.14 |
         |  42.13 |  28.57 |
---------+--------+--------+
TOTAL        3340        7     3347
            99.79     0.21   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                          0.526   DF=   1  PROB=0.4681
PHI                                -0.013
CONTINGENCY COEFFICIENT             0.013
CRAMER'S V                          0.013
LIKELIHOOD RATIO CHISQUARE          0.560   DF=   1  PROB=0.4583
CONTINUITY ADJ. CHI-SQUARE          0.117   DF=   1  PROB=0.7320
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.3749
                    (2-TAIL)                         PROB=0.7062
```

Trach Care

Same
very low
use

```
SAS                                                                14:02 TUESDAY, DECEMBER 24, 1985  115
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY TRFN1468

D1          TRFN1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1934 |      4 |   1938
         |   -0.5 |    0.5 |
         |  57.78 |   0.12 |  57.90
         |  99.79 |   0.21 |
         |  57.89 |  66.67 |
---------+--------+--------+
PRESENT  |   1407 |      2 |   1409
         |    0.5 |   -0.5 |
         |  42.04 |   0.06 |  42.10
         |  99.86 |   0.14 |
         |  42.11 |  33.33 |
---------+--------+--------+
TOTAL        3341        6     3347
            99.82     0.18   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                          0.189   DF=   1  PROB=0.6634
PHI                                -0.008
CONTINGENCY COEFFICIENT             0.008
CRAMER'S V                          0.008
LIKELIHOOD RATIO CHISQUARE          0.194   DF=   1  PROB=0.6596
CONTINUITY ADJ. CHI-SQUARE          0.000   DF=   1  PROB=0.9829
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.5009
                    (2-TAIL)                         PROB=1.0000
```

Transfusions.

very low use

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  116
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY OSPC146B

D1          OSPC146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1786 |    152 |   1938
         |   -9.0 |    9.0 |
         |  53.36 |   4.54 |  57.90
         |  92.16 |   7.84 |
         |  57.61 |  61.54 |
---------+--------+--------+
PRESENT  |   1314 |     95 |   1409
         |    9.0 |   -9.0 |
         |  39.26 |   2.84 |  42.10
         |  93.26 |   6.74 |
         |  42.39 |  38.46 |
---------+--------+--------+
TOTAL        3100      247     3347
            92.62     7.38   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        1.446   DF=   1  PROB=0.2291
PHI                              -0.021
CONTINGENCY COEFFICIENT           0.021
CRAMER'S V                        0.021
LIKELIHOOD RATIO CHISQUARE        1.468   DF=   1  PROB=0.2272
CONTINUITY ADJ. CHI-SQUARE        1.290   DF=   1  PROB=0.2561
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.1278
                    (2-TAIL)                       PROB=0.2560
```

Other special Trm's same.

Physician Visits For Assessment

4-7 days week | 1-3 days week | 2-3 day month | monthly | bimonthly | 3-months | Not Appl. | 1-3 day month

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  117
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ASSESS47

D1          ASSESS47

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .|      1|      2|      3|      4|      5|      6|       |      8|  TOTAL
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
ABSENT   |      2|     16|     88|    230|    981|    383|    152|     20|     66|   1936
         |      .|   -4.3|   -0.1|   -6.4| -128.7|   95.0|   29.2|   -4.9|   20.2|
         |      .|   0.48|   2.63|   6.88|  29.36|  11.46|   4.55|   0.60|   1.98|  57.95
         |      .|   0.83|   4.55|  11.88|  50.67|  19.78|   7.85|   1.03|   3.41|
         |      .|  45.71|  57.89|  56.37|  51.23|  77.06|  71.70|  46.51|  83.54|
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
PRESENT  |      4|     19|     64|    178|    934|    114|     60|     23|     13|   1405
         |      .|    4.3|    0.1|    6.4|  128.7|  -95.0|  -29.2|    4.9|  -20.2|
         |      .|   0.57|   1.92|   5.33|  27.95|   3.41|   1.80|   0.69|   0.39|  42.05
         |      .|   1.35|   4.56|  12.67|  66.48|   8.11|   4.27|   1.64|   0.93|
         |      .|  54.29|  42.11|  43.63|  48.77|  22.94|  28.30|  53.49|  16.46|
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
TOTAL           .      35     152     408    1915     497     212      43      79    3341
                .    1.05    4.55   12.21   57.32   14.88    6.35    1.29    2.36  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                  152.574   DF=   7  PROB=0.0001
PHI                           0.214
CONTINGENCY COEFFICIENT       0.209
CRAMER'S V                    0.214
LIKELIHOOD RATIO CHISQUARE  161.167   DF=   7  PROB=0.0001
```

Generally same use of physicians.

75

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1985  118
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ORDER47

D1          ORDER47

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .|      1|      2|      3|      4|      5|      6|      7|      8|  TOTAL
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
ABSENT   |      2|     14|     74|    102|   1132|    440|    107|      1|     66|   1936
         |      .|   -1.1|    6.8|  -11.5| -141.7|  100.2|   27.1|   -0.2|   20.3|
         |      .|   0.42|   2.21|   3.05|  33.85|  13.16|   3.20|   0.03|   1.97|  57.89
         |      .|   0.72|   3.82|   5.27|  58.47|  22.73|   5.53|   0.05|   3.41|
         |      .|  53.85|  63.79|  52.04|  51.46|  74.96|  77.54|  50.00|  83.54|
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
PRESENT  |      1|     12|     42|     94|   1068|    147|     31|      1|     13|   1408
         |      .|    1.1|   -6.8|   11.5|  141.7| -100.2|  -27.1|    0.2|  -20.3|
         |      .|   0.36|   1.26|   2.81|  31.94|   4.40|   0.93|   0.03|   0.39|  42.11
         |      .|   0.85|   2.98|   6.68|  75.85|  10.44|   2.20|   0.07|   0.92|
         |      .|  46.15|  36.21|  47.96|  48.55|  25.04|  22.46|  50.00|  16.46|
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
TOTAL           .      26     116     196    2200     587     138       2      79    3344
                .    0.78    3.47    5.86   65.79   17.55    4.13    0.06    2.36  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     156.336   DF=   7  PROB=0.0001
PHI                              0.216
CONTINGENCY COEFFICIENT          0.211
CRAMER'S V                       0.216
LIKELIHOOD RATIO CHISQUARE     163.739   DF=   7  PROB=0.0001
```

Physician Visits
for orders

Same visit pattern

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1985  119
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY PROCS47

D1          PROCS47

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .|      1|      2|      3|      4|      5|      6|      7|  TOTAL
---------+-------+-------+-------+-------+-------+-------+-------+-------+
ABSENT   |     98|      5|     31|     45|     64|     41|    111|   1543|   1840
         |      .|   -2.4|    8.2|    8.0|   -6.0|   10.2|   17.0|  -35.0|
         |      .|   0.15|   0.96|   1.39|   1.98|   1.27|   3.44|  47.76|  56.95
         |      .|   0.27|   1.68|   2.45|   3.48|   2.23|   6.03|  83.86|
         |      .|  38.46|  77.50|  69.23|  52.03|  75.93|  67.27|  55.68|
---------+-------+-------+-------+-------+-------+-------+-------+-------+
PRESENT  |     18|      8|      9|     20|     59|     13|     54|   1228|   1391
         |      .|    2.4|   -8.2|   -8.0|    6.0|  -10.2|  -17.0|   35.0|
         |      .|   0.25|   0.28|   0.62|   1.83|   0.40|   1.67|  38.01|  43.05
         |      .|   0.58|   0.65|   1.44|   4.24|   0.93|   3.88|  88.28|
         |      .|  61.54|  22.50|  30.77|  47.97|  24.07|  32.73|  44.32|
---------+-------+-------+-------+-------+-------+-------+-------+-------+
TOTAL           .      13      40      65     123      54     165    2771    3231
                .    0.40    1.24    2.01    3.81    1.67    5.11   85.76  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      30.828   DF=   6  PROB=0.0001
PHI                              0.098
CONTINGENCY COEFFICIENT ·        0.097
CRAMER'S V                       0.098
LIKELIHOOD RATIO CHISQUARE      32.210   DF=   6  PROB=0.0001
```

Physician Visits
for Treatments

Same visit
pattern

```
SAS                                                                                    14:02 TUESDAY, DECEMBER 24, 1985  120
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ADMN47

D1          ADMN47

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|       7|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |     102|       3|      24|      79|     357|      60|     255|    1058|   1836
         |       .|     1.3|     8.6|    13.0|   -24.8|    -2.6|   -37.4|    41.9|
         |       .|    0.09|    0.74|    2.45|   11.06|    1.86|    7.90|   32.79|  56.89
         |       .|    0.16|    1.31|    4.30|   19.44|    3.27|   13.89|   57.63|
         |       .|  100.00|   88.89|   68.10|   53.20|   54.55|   49.61|   59.24|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      18|       0|       3|      37|     314|      50|     259|     728|   1391
         |       .|    -1.3|    -8.6|   -13.0|    24.8|     2.6|    37.4|   -41.9|
         |       .|    0.00|    0.09|    1.15|    9.73|    1.55|    8.03|   22.56|  43.11
         |       .|    0.00|    0.22|    2.66|   22.57|    3.59|   18.62|   52.34|
         |       .|    0.00|   11.11|   31.90|   46.80|   45.45|   50.39|   40.76|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           .        3       27      116      671      110      514     1786     3227
                .     0.09     0.84     3.59    20.79     3.41    15.93    55.35   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    38.579    DF=   6  PROB=0.0001
PHI                            0.109
CONTINGENCY COEFFICIENT        0.109
CRAMER'S V                     0.109
LIKELIHOOD RATIO CHISQUARE    41.774    DF=   6  PROB=0.0001
```

Physician Visits for Administrative.

same visit pattern

```
SAS                                                                                    14:02 TUESDAY, DECEMBER 24, 1985  121
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY CMYSPT48

D1          CMYSPT48

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|       7|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |    1518|       4|       6|      51|      75|      41|     219|      24|    420
         |       .|     1.3|     1.4|     1.2|    15.3|     1.2|   -21.9|     1.4|
         |       .|    0.63|    0.95|    8.06|   11.85|    6.48|   34.60|    3.79|  66.35
         |       .|    0.95|    1.43|   12.14|   17.86|    9.76|   52.14|    5.71|
         |       .|  100.00|   85.71|   68.00|   83.33|   68.33|   60.33|   70.59|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |    1198|       0|       1|      24|      15|      19|     144|      10|    213
         |       .|    -1.3|    -1.4|    -1.2|   -15.3|    -1.2|    21.9|    -1.4|
         |       .|    0.00|    0.16|    3.79|    2.37|    3.00|   22.75|    1.58|  33.65
         |       .|    0.00|    0.47|   11.27|    7.04|    8.92|   67.61|    4.69|
         |       .|    0.00|   14.29|   32.00|   16.67|   31.67|   39.67|   29.41|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           .        4        7       75       90       60      363       34      633
                .     0.63     1.11    11.85    14.22     9.48    57.35     5.37   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                    21.193    DF=   6  PROB=0.0017
PHI                            0.183
CONTINGENCY COEFFICIENT        0.180
CRAMER'S V                     0.183
LIKELIHOOD RATIO CHISQUARE    23.967    DF=   6  PROB=0.0005
```

Indep

Informal only

Formal only

Formal + Informal

Unavailable

Insufficient

Cannot determine

Community and Informal Supports

Very "What IF" question.

Housing Stabilized

Housing/Not Avail

No Housing Suitable

Cannot Live in Community

Cannot Determine.

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1986  122
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY HOUSPT49

D1           HOUSPT49

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |          .|      11|      21|      31|      41|      51|  TOTAL
---------+-----------+--------+--------+--------+--------+--------+
ABSENT   |       1522|      84|      52|      33|     224|      23|    416
         |          .|    20.5|     7.0|     1.9|   -30.0|     0.5|
         |          .|   13.35|    8.27|    5.25|   35.61|    3.66|  66.14
         |          .|   20.19|   12.50|    7.93|   53.85|    5.53|
         |          .|   87.50|   76.47|   70.21|   58.33|   67.65|
---------+-----------+--------+--------+--------+--------+--------+
PRESENT  |       1196|      12|      16|      14|     160|      11|    213
         |          .|   -20.5|    -7.0|    -1.9|    30.0|    -0.5|
         |          .|    1.91|    2.54|    2.23|   25.44|    1.75|  33.86
         |          .|    5.63|    7.51|    6.57|   75.12|    5.16|
         |          .|   12.50|   23.53|   29.79|   41.67|   32.35|
---------+-----------+--------+--------+--------+--------+--------+
TOTAL               .       96       68       47      384       34      629
                    .    15.26    10.81     7.47    61.05     5.41   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      33.629    DF=   4  PROB=0.0001
PHI                              0.231
CONTINGENCY COEFFICIENT          0.225
CRAMER'S V                       0.231
LIKELIHOOD RATIO CHISQUARE      37.069    DF=   4  PROB=0.0001
```

Community Housing

For demented, decision is ~~most~~ often that client cannot exist in the community regardless of housing

Very subjective question.

Excellent

Limited

Min/Poor

None

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1986  123
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY INSPT50

D1           INSPT50

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |          .|       1|       2|       3|       4|  TOTAL
---------+-----------+--------+--------+--------+--------+
ABSENT   |       1620|     187|     110|      92|      29|    418
         |          .|    11.5|    -5.9|     1.9|    -7.4|
         |          .|   29.64|   17.43|   14.58|    4.60|  66.24
         |          .|   44.74|   26.32|   22.01|    6.94|
         |          .|   70.57|   62.86|   67.65|   52.73|
---------+-----------+--------+--------+--------+--------+
PRESENT  |       1196|      78|      65|      44|      26|    213
         |          .|   -11.5|     5.9|    -1.9|     7.4|
         |          .|   12.36|   10.30|    6.97|    4.12|  33.76
         |          .|   36.62|   30.52|   20.66|   12.21|
         |          .|   29.43|   37.14|   32.35|   47.27|
---------+-----------+--------+--------+--------+--------+
TOTAL               .      265      175      136       55      631
                    .    42.00    27.73    21.55     8.72   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       7.725    DF=   3  PROB=0.0521
PHI                              0.111
CONTINGENCY COEFFICIENT          0.110
CRAMER'S V                       0.111
LIKELIHOOD RATIO CHISQUARE       7.546    DF=   3  PROB=0.0564
```

Informal Supports

Impediment to Home Discharge

Severe Condition · Inadequate Function · Severe Mental · Poor Motivation · Inadequate Emotional · Inadequate Functional · Inadequate Formal · Inadequate Financial · Inadequate Family · Cannot Determine

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  124
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY PIMPMTS1

D1        PIMPMTS1

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |         .|      11|      21|      31|      41|      51|      61|      71|      81|      91|     101|  TOTAL
---------+----------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      1628|      85|     162|      42|      38|      16|      20|      33|       9|       4|       1|    410
         |         .|     7.9|    19.6|   -33.1|     2.4|    -1.1|     2.9|     0.0|     3.1|    -1.9|     0.3|
         |         .|   13.67|   26.05|    6.75|    6.11|    2.57|    3.22|    5.31|    1.45|    0.64|    0.16|  65.92
         |         .|   20.73|   39.51|   10.24|    9.27|    3.90|    4.88|    8.05|    2.20|    0.98|    0.24|
         |         .|   72.65|   75.00|   36.84|   70.37|   61.54|   76.92|   66.00|  100.00|   44.44|  100.00|
---------+----------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      1197|      32|      54|      72|      16|      10|       6|      17|       0|       5|       0|    212
         |         .|    -7.9|   -19.6|    33.1|    -2.4|     1.1|    -2.9|    -0.0|    -3.1|     1.9|    -0.3|
         |         .|    5.14|    8.68|   11.58|    2.57|    1.61|    0.96|    2.73|    0.00|    0.80|    0.00|  34.08
         |         .|   15.09|   25.47|   33.96|    7.55|    4.72|    2.83|    8.02|    0.00|    2.36|    0.00|
         |         .|   27.35|   25.00|   63.16|   29.63|   38.46|   23.08|   34.00|    0.00|   55.56|    0.00|
---------+----------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL              .      117      216      114       54       26       26       50        9        9        1      622
                   .    18.81    34.73    18.33     8.68     4.18     4.18     8.04     1.45     1.45     0.16   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    62.305    DF=   9  PROB=0.0001
PHI                            0.316
CONTINGENCY COEFFICIENT        0.302
CRAMER'S V                     0.316
LIKELIHOOD RATIO CHISQUARE    63.030    DF=   9  PROB=0.0001
```

Demented Group Reason of impediments is most often the mental condition.

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SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  125
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY RUG

D1        RUG

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |SPEC A  |SPEC B  |REHAB A |REHAB B |COMP A  |COMP B  |COMP C  |COMP D  |  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      39|     106|      60|      94|      97|     141|      67|      17|   1938
         |    10.6|    -4.0|    20.6|    23.4|    21.1|    13.6|   -25.1|    -2.7|
         |    1.17|    3.17|    1.79|    2.81|    2.90|    4.21|    2.00|    0.51|  57.90
         |    2.01|    5.47|    3.10|    4.85|    5.01|    7.28|    3.46|    0.88|
         |   79.59|   55.79|   88.24|   77.05|   74.05|   64.09|   42.14|   50.00|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      10|      84|       8|      28|      34|      79|      92|      17|   1409
         |   -10.6|     4.0|   -20.6|   -23.4|   -21.1|   -13.6|    25.1|     2.7|
         |    0.30|    2.51|    0.24|    0.84|    1.02|    2.36|    2.75|    0.51|  42.10
         |    0.71|    5.96|    0.57|    1.99|    2.41|    5.61|    6.53|    1.21|
         |   20.41|   44.21|   11.76|   22.95|   25.95|   35.91|   57.86|   50.00|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL          49      190       68      122      131      220      159       34     3347
             1.46     5.68     2.03     3.65     3.91     6.57     4.75     1.02   100.00
(CONTINUED)

TABLE OF D1 BY RUG

D1        RUG

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |MENTAL A|MENTAL B|MENTAL C|PHYS A  |PHYS B  |PHYS C  |PHYS D  |PHYS E  |  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      53|      87|      36|     635|      59|     348|      77|      22|   1938
         |    -9.5|   -66.4|   -36.4|   133.0|    -0.1|   -30.1|   -43.4|    -4.6|
         |    1.58|    2.60|    1.08|   18.97|    1.76|   10.40|    2.30|    0.66|  57.90
         |    2.73|    4.49|    1.86|   32.77|    3.04|   17.96|    3.97|    1.14|
         |   49.07|   32.83|   28.80|   73.24|   57.84|   53.29|   37.02|   47.83|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      55|     178|      89|     232|      43|     305|     131|      24|   1409
         |     9.5|    66.4|    36.4|  -133.0|     0.1|    30.1|    43.4|     4.6|
         |    1.64|    5.32|    2.66|    6.93|    1.28|    9.11|    3.91|    0.72|  42.10
         |    3.90|   12.63|    6.32|   16.47|    3.05|   21.65|    9.30|    1.70|
         |   50.93|   67.17|   71.20|   26.76|   42.16|   46.71|   62.98|   52.17|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL         108      265      125      867      102      653      208       46     3347
             3.23     7.92     3.73    25.90     3.05    19.51     6.21     1.37   100.00
```

RUG distribution

Not Demented

Demented

Demented Group:
1. More in Behavioral Category of RUGs
2. Higher ADL Incapacity

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  126
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    332.097   DF=  15  PROB=0.0001
PHI                             0.315
CONTINGENCY COEFFICIENT         0.300
CRAMER'S V                      0.315
LIKELIHOOD RATIO CHISQUARE    342.358   DF=  15  PROB=0.0001
```

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SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  127
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF D1 BY ADLSUM

D1          ADLSUM

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       3 |       4 |       5 |       6 |       7 |       8 |       9 |      10 |  TOTAL
---------+---------+---------+---------+---------+---------+---------+---------+---------+
ABSENT   |     825 |     103 |     263 |     265 |     183 |     196 |     100 |       3 |   1938
         |   157.4 |    -0.8 |     3.6 |    -7.7 |   -44.6 |   -84.2 |   -21.6 |    -2.2 |
         |   24.65 |    3.08 |    7.86 |    7.92 |    5.47 |    5.86 |    2.99 |    0.09 |  57.90
         |   42.57 |    5.31 |   13.57 |   13.67 |    9.44 |   10.11 |    5.16 |    0.15 |
         |   71.55 |   57.54 |   58.71 |   56.26 |   46.56 |   40.50 |   47.62 |   33.33 |
---------+---------+---------+---------+---------+---------+---------+---------+---------+
PRESENT  |     328 |      76 |     185 |     206 |     210 |     288 |     110 |       6 |   1409
         |  -157.4 |     0.8 |    -3.6 |     7.7 |    44.6 |    84.2 |    21.6 |     2.2 |
         |    9.80 |    2.27 |    5.53 |    6.15 |    6.27 |    8.60 |    3.29 |    0.18 |  42.10
         |   23.28 |    5.39 |   13.13 |   14.62 |   14.90 |   20.44 |    7.81 |    0.43 |
         |   28.45 |   42.46 |   41.29 |   43.74 |   53.44 |   59.50 |   52.38 |   66.67 |
---------+---------+---------+---------+---------+---------+---------+---------+---------+
TOTAL        1153       179       448       471       393       484       210         9     3347
            34.45      5.35     13.39     14.07     11.74     14.46      6.27      0.27   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    181.005   DF=   7  PROB=0.0001
PHI                             0.233
CONTINGENCY COEFFICIENT         0.227
CRAMER'S V                      0.233
LIKELIHOOD RATIO CHISQUARE    183.548   DF=   7  PROB=0.0001
```

Not Demented

Demented

ADL SUM

Demented Group has higher ADL score than non-demented.

These tables are the
same as for the
previous section but
are for the group
defined with two or more
symptoms of dementia
with psychiatric patients
not included.

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  128
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY SEXS

S2NO_PSY     SEXS

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |        |       1|       2|  TOTAL
---------+--------+--------+--------+
ABSENT   |       3|     337|    1038|   1375
         |       .|    39.0|   -39.0|
         |       .|   10.09|   31.07|  41.16
         |       .|   24.51|   75.49|
         |       .|   46.55|   39.66|
---------+--------+--------+--------+
PRESENT  |       3|     387|    1579|   1966
         |       .|   -39.0|    39.0|
         |       .|   11.58|   47.26|  58.84
         |       .|   19.68|   80.32|
         |       .|   53.45|   60.34|
---------+--------+--------+--------+
TOTAL            .      724     2617     3341
                 .    21.67    78.33   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      11.098   DF=   1  PROB=0.0009
PHI                              0.058
CONTINGENCY COEFFICIENT          0.058
CRAMER'S V                       0.058
LIKELIHOOD RATIO CHISQUARE      11.009   DF=   1  PROB=0.0009
CONTINUITY ADJ. CHI-SQUARE      10.812   DF=   1  PROB=0.0010
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0005
                    (2-TAIL)                      PROB=0.0010
```

Male Female

SEX

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  129
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY PAYORS

S2NO_PSY     PAYORS

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|       8|       9|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |     948|     112|      53|      11|     211|       4|       2|      14|      23|   1378
         |     9.7|   -17.3|    20.9|     4.4|   -29.9|     1.1|    -1.3|     6.2|     6.1|
         |   28.32|    3.35|    1.58|    0.33|    6.30|    0.12|    0.06|    0.42|    0.69|  41.17
         |   68.80|    8.13|    3.85|    0.80|   15.31|    0.29|    0.15|    1.02|    1.67|
         |   41.60|   35.67|   67.95|   68.75|   36.07|   57.14|   25.00|   73.68|   56.10|
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |    1331|     202|      25|       5|     374|       3|       6|       5|      18|   1969
         |    -9.7|    17.3|   -20.9|    -4.4|    29.9|    -1.1|     1.3|    -6.2|    -6.1|
         |   39.77|    6.04|    0.75|    0.15|   11.17|    0.09|    0.18|    0.15|    0.54|  58.83
         |   67.60|   10.26|    1.27|    0.25|   18.99|    0.15|    0.30|    0.25|    0.91|
         |   58.40|   64.33|   32.05|   31.25|   63.93|   42.86|   75.00|   26.32|   43.90|
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL        2279      314       78       16      585        7        8       19       41     3347
            68.09     9.38     2.33     0.48    17.48     0.21     0.24     0.57     1.22   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                      52.186   DF=   8  PROB=0.0001
PHI                              0.125
CONTINGENCY COEFFICIENT          0.124
CRAMER'S V                       0.125
LIKELIHOOD RATIO CHISQUARE      51.823   DF=   8  PROB=0.0001
```

Payor.

```
SAS                                                                                    14:02 TUESDAY, DECEMBER 24, 1985  130
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY MARITAL9

S2NO_PSY     MARITAL9

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       0|       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      0 |    170 |    823 |    274 |     27 |     82 |      2 |   1378
         |   -0.4 |  -37.1 |  -39.5 |   53.3 |    3.5 |   21.5 |   -1.3 |
         |   0.00 |   5.08 |  24.59 |   8.19 |   0.81 |   2.45 |   0.06 |  41.17
         |   0.00 |  12.34 |  59.72 |  19.88 |   1.96 |   5.95 |   0.15 |
         |   0.00 |  33.80 |  39.28 |  51.12 |  47.37 |  55.78 |  25.00 |
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      1 |    333 |   1272 |    262 |     30 |     65 |      6 |   1969
         |    0.4 |   37.1 |   39.5 |  -53.3 |   -3.5 |  -21.5 |    1.3 |
         |   0.03 |   9.95 |  38.00 |   7.83 |   0.90 |   1.94 |   0.18 |  58.83
         |   0.05 |  16.91 |  64.60 |  13.31 |   1.52 |   3.30 |   0.30 |
         | 100.00 |  66.20 |  60.72 |  48.88 |  52.63 |  44.22 |  75.00 |
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           1      503     2095      536       57      147        8     3347
             0.03    15.03    62.59    16.01     1.70     4.39     0.24   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                        51.899    DF=   6  PROB=0.0001
PHI                                0.124
CONTINGENCY COEFFICIENT            0.123
CRAMER'S V                         0.124
LIKELIHOOD RATIO CHISQUARE        51.738    DF=   6  PROB=0.0001
```

Marital Status

```
SAS                                                                                    14:02 TUESDAY, DECEMBER 24, 1985  131
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY ADLOC11A

S2NO_PSY     ADLOC11A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|       8|       9|      10|      11|      13|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |    131 |    118 |    114 |     46 |    103 |    138 |     22 |     41 |    650 |      0 |     11 |      4 |   1378
         |   33.8 |  -15.4 |   21.8 |    1.5 |  -48.5 |   19.8 |   10.1 |   10.1 |  -36.7 |   -0.4 |    3.6 |    0.3 |
         |   3.91 |   3.53 |   3.41 |   1.37 |   3.08 |   4.12 |   0.66 |   1.22 |  19.42 |   0.00 |   0.33 |   0.12 |  41.17
         |   9.51 |   8.56 |   8.27 |   3.34 |   7.47 |  10.01 |   1.60 |   2.98 |  47.17 |   0.00 |   0.80 |   0.29 |
         |  55.51 |  36.42 |  50.89 |  42.59 |  27.99 |  48.08 |  75.86 |  54.67 |  38.97 |   0.00 |  61.11 |  44.44 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |    105 |    206 |    110 |     62 |    265 |    149 |      7 |     34 |   1018 |      1 |      7 |      5 |   1969
         |  -33.8 |   15.4 |  -21.8 |   -1.5 |   48.5 |  -19.8 |  -10.1 |  -10.1 |   36.7 |    0.4 |   -3.6 |   -0.3 |
         |   3.14 |   6.15 |   3.29 |   1.85 |   7.92 |   4.45 |   0.21 |   1.02 |  30.42 |   0.03 |   0.21 |   0.15 |  58.83
         |   5.33 |  10.46 |   5.59 |   3.15 |  13.46 |   7.57 |   0.36 |   1.73 |  51.70 |   0.05 |   0.36 |   0.25 |
         |  44.49 |  63.58 |  49.11 |  57.41 |  72.01 |  51.92 |  24.14 |  45.33 |  61.03 | 100.00 |  38.89 |  55.56 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL         236      324      224      108      368      287       29       75     1668        1       18        9     3347
             7.05     9.68     6.69     3.23    10.99     8.57     0.87     2.24    49.84     0.03     0.54     0.27   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        91.027    DF=  11  PROB=0.0001
PHI                                0.165
CONTINGENCY COEFFICIENT            0.163
CRAMER'S V                         0.165
LIKELIHOOD RATIO CHISQUARE        91.917    DF=  11  PROB=0.0001
```

Admission Location

Admission Reason

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SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1985  132
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY REASON12

S2NO_PSY     REASON12

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      1|      2|      3|      4|      5|      6|      7|      8|      9|     10|     11|  TOTAL
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
ABSENT   |    165|     12|    641|    114|    208|    102|     46|      3|     34|     15|      1|   1378
         | -142.5|    4.6|   50.2|   -0.9|   -4.4|   39.8|   20.9|    0.9|   12.6|    8.0|    0.2|
         |   4.93|   0.36|  19.15|   3.41|   6.21|   3.05|   1.37|   0.09|   1.02|   0.45|   0.03|  41.17
         |  11.97|   0.87|  46.52|   8.27|  15.09|   7.40|   3.34|   0.22|   2.47|   1.09|   0.07|
         |  22.09|  66.67|  44.67|  40.86|  40.31|  67.55|  75.41|  60.00|  65.38|  88.24|  50.00|
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
PRESENT  |    582|      6|    794|    165|    308|     49|     15|      2|     18|      2|      1|   1969
         |  142.5|   -4.6|  -50.2|    0.9|    4.4|  -39.8|  -20.9|   -0.9|  -12.6|   -8.0|   -0.2|
         |  17.39|   0.18|  23.72|   4.93|   9.20|   1.46|   0.45|   0.06|   0.54|   0.06|   0.03|  58.83
         |  29.56|   0.30|  40.33|   8.38|  15.64|   2.49|   0.76|   0.10|   0.91|   0.10|   0.05|
         |  77.91|  33.33|  55.33|  59.14|  59.69|  32.45|  24.59|  40.00|  34.62|  11.76|  50.00|
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
TOTAL         747      18    1435     279     516     151      61       5      52      17       2    3347
            22.32    0.54   42.87    8.34   15.42    4.51    1.82    0.15    1.55    0.51    0.06  100.00
(CONTINUED)

TABLE OF S2NO_PSY BY REASON12

S2NO_PSY     REASON12

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |     12|     13|     14|     15|     16|     17|     18|     19|     20|     22|     23|  TOTAL
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
ABSENT   |      2|      4|     18|      2|      1|      2|      1|      5|      0|      1|      1|   1378
         |    1.2|    1.1|    8.9|   -0.5|   -0.2|   -0.1|    0.6|    1.7|   -0.4|   -0.2|   -1.5|
         |   0.06|   0.12|   0.54|   0.06|   0.03|   0.06|   0.03|   0.15|   0.00|   0.03|   0.03|  41.17
         |   0.15|   0.29|   1.31|   0.15|   0.07|   0.15|   0.07|   0.36|   0.00|   0.07|   0.07|
         | 100.00|  57.14|  81.82|  33.33|  33.33|  40.00| 100.00|  62.50|   0.00|  33.33|  16.67|
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
PRESENT  |      0|      3|      4|      4|      2|      3|      0|      3|      1|      2|      5|   1969
         |   -1.2|   -1.1|   -8.9|    0.5|    0.2|    0.1|   -0.6|   -1.7|    0.4|    0.2|    1.5|
         |   0.00|   0.09|   0.12|   0.12|   0.06|   0.09|   0.00|   0.09|   0.03|   0.06|   0.15|  58.83
         |   0.00|   0.15|   0.20|   0.20|   0.10|   0.15|   0.00|   0.15|   0.05|   0.10|   0.25|
         |   0.00|  42.86|  18.18|  66.67|  66.67|  60.00|   0.00|  37.50| 100.00|  66.67|  83.33|
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
TOTAL           2       7      22       6       3       5       1       8       1       3       6    3347
             0.06    0.21    0.66    0.18    0.09    0.15    0.03    0.24    0.03    0.09    0.18  100.00
```

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1985  133
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                     250.423   DF=  21  PROB=0.0001
PHI                              0.274
CONTINGENCY COEFFICIENT          0.264
CRAMER'S V                       0.274
LIKELIHOOD RATIO CHISQUARE     261.327   DF=  21  PROB=0.0001
```

```
SAS                                                                 14:02 TUESDAY, DECEMBER 24, 1985  134
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF SZHO_PSY BY COMA14

SZHO_PSY     COMA14

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |   .     |YES     |NO      |  TOTAL
---------+---------+--------+--------+
ABSENT   |        3|       1|    1374|   1375
         |        .|   -15.5|    15.5|
         |        .|    0.03|   41.14|  41.17
         |        .|    0.07|   99.93|
         |        .|    2.50|   41.64|
---------+---------+--------+--------+
PRESENT  |        4|      39|    1926|   1965
         |        .|    15.5|   -15.5|
         |        .|    1.17|   57.66|  58.83
         |        .|    1.98|   98.02|
         |        .|   97.50|   58.36|
---------+---------+--------+--------+
TOTAL             .       40     3300    3340
                  .     1.20    98.80  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         24.993   DF=    1  PROB=0.0001
PHI                                -0.087
CONTINGENCY COEFFICIENT             0.086
CRAMER'S V                          0.087
LIKELIHOOD RATIO CHISQUARE         34.098   DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE         23.403   DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Comatose

```
SAS                                                                 14:02 TUESDAY, DECEMBER 24, 1985  135
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF SZHO_PSY BY TERM14

SZHO_PSY     TERM14

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |   .     |YES     |NO      |  TOTAL
---------+---------+--------+--------+
ABSENT   |        3|      12|    1363|   1375
         |        .|    -4.9|     4.9|
         |        .|    0.36|   40.81|  41.17
         |        .|    0.87|   99.13|
         |        .|   29.27|   41.32|
---------+---------+--------+--------+
PRESENT  |        4|      29|    1936|   1965
         |        .|     4.9|    -4.9|
         |        .|    0.87|   57.96|  58.83
         |        .|    1.48|   98.52|
         |        .|   70.73|   58.68|
---------+---------+--------+--------+
TOTAL             .       41     3299    3340
                  .     1.23    98.77  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          2.427   DF=    1  PROB=0.1193
PHI                                -0.027
CONTINGENCY COEFFICIENT             0.027
CRAMER'S V                          0.027
LIKELIHOOD RATIO CHISQUARE          2.526   DF=    1  PROB=0.1120
CONTINUITY ADJ. CHI-SQUARE          1.956   DF=    1  PROB=0.1621
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0792
                    (2-TAIL)                          PROB=0.1502
```

Terminally Ill

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  136
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY ALCOHL14

S2NO_PSY     ALCOHL14

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |     .      |YES      |NO       |   TOTAL
---------+------------+---------+---------+
ABSENT   |          7 |      55 |    1316 |    1371
         |          . |    12.2 |   -12.2 |
         |          . |    1.65 |   39.47 |   41.12
         |          . |    4.01 |   95.99 |
         |          . |   52.88 |   40.74 |
---------+------------+---------+---------+
PRESENT  |          6 |      49 |    1914 |    1963
         |          . |   -12.2 |    12.2 |
         |          . |    1.47 |   57.41 |   58.88
         |          . |    2.50 |   97.50 |
         |          . |   47.12 |   59.26 |
---------+------------+---------+---------+
TOTAL               .       104      3230      3334
                    .      3.12     96.88    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          6.136    DF=    1  PROB=0.0133
PHI                                 0.043
CONTINGENCY COEFFICIENT             0.043
CRAMER'S V                          0.043
LIKELIHOOD RATIO CHISQUARE          6.023    DF=    1  PROB=0.0141
CONTINUITY ADJ. CHI-SQUARE          5.643    DF=    1  PROB=0.0175
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0092
                    (2-TAIL)                           PROB=0.0160
```

Alcohol Abuse

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  137
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY DRUG14

S2NO_PSY     DRUG14

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |     .      |YES      |NO       |   TOTAL
---------+------------+---------+---------+
ABSENT   |          6 |       6 |    1364 |    1370
         |          . |     2.7 |    -2.7 |
         |          . |    0.18 |   40.91 |   41.09
         |          . |    0.44 |   99.56 |
         |          . |   75.00 |   41.01 |
---------+------------+---------+---------+
PRESENT  |          5 |       2 |    1962 |    1964
         |          . |    -2.7 |     2.7 |
         |          . |    0.06 |   58.85 |   58.91
         |          . |    0.10 |   99.90 |
         |          . |   25.00 |   58.99 |
---------+------------+---------+---------+
TOTAL               .         8      3326      3334
                    .      0.24     99.76    100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                          3.809    DF=    1  PROB=0.0510
PHI                                 0.034
CONTINGENCY COEFFICIENT             0.034
CRAMER'S V                          0.034
LIKELIHOOD RATIO CHISQUARE          3.801    DF=    1  PROB=0.0512
CONTINUITY ADJ. CHI-SQUARE          2.534    DF=    1  PROB=0.1114
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0567
                    (2-TAIL)                           PROB=0.0711
```

Drug Abuse

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  138
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NG_PSY BY VISION17

S2NG_PSY      VISION17

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |       2|     600|     597|     116|      55|       8|   1376
         |       .|   259.0|   -41.4|  -132.5|   -28.9|   -56.2|
         |       .|   17.94|   17.85|    3.47|    1.64|    0.24|  41.14
         |       .|   43.60|   43.39|    8.43|    4.00|    0.58|
         |       .|   72.38|   38.47|   19.21|   26.96|    5.13|
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |       0|     229|     955|     488|     149|     148|   1969
         |       .|  -259.0|    41.4|   132.5|    28.9|    56.2|
         |       .|    6.85|   28.55|   14.59|    4.45|    4.42|  58.86
         |       .|   11.63|   48.50|   24.78|    7.57|    7.52|
         |       .|   27.62|   61.53|   80.79|   73.04|   94.87|
---------+--------+--------+--------+--------+--------+--------+
TOTAL            .     829     1552      604      204      156     3345
                 .   24.78    46.40    18.06     6.10     4.66   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     589.125    DF=    4   PROB=0.0001
PHI                              0.409
CONTINGENCY COEFFICIENT          0.378
CRAMER'S V                       0.409
LIKELIHOOD RATIO CHISQUARE     594.246    DF=    4   PROB=0.0001
```

Vision Problems

Demented group has greater vision problems.

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  139
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NG_PSY BY HEAR18

S2NG_PSY      HEAR18

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      . |      1 |      2 |      3 |      4 |      5 |  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |       1|     860|     349|     133|      33|       2|   1377
         |       .|   227.1|   -81.5|   -68.7|   -27.1|   -49.9|
         |       .|   25.70|   10.43|    3.97|    0.99|    0.06|  41.15
         |       .|   62.46|   25.34|    9.66|    2.40|    0.15|
         |       .|   55.92|   33.37|   27.14|   22.60|    1.59|
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |       0|     678|     697|     357|     113|     124|   1969
         |       .|  -227.1|    81.5|    68.7|    27.1|    49.9|
         |       .|   20.26|   20.83|   10.67|    3.38|    3.71|  58.85
         |       .|   34.43|   35.40|   18.13|    5.74|    6.30|
         |       .|   44.08|   66.63|   72.86|   77.40|   98.41|
---------+--------+--------+--------+--------+--------+--------+
TOTAL            .    1538     1046      490      146      126     3346
                 .   45.97    31.26    14.64     4.36     3.77   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     308.532    DF=    4   PROB=0.0001
PHI                              0.303
CONTINGENCY COEFFICIENT          0.290
CRAMER'S V                       0.303
LIKELIHOOD RATIO CHISQUARE     341.088    DF=    4   PROB=0.0001
```

Hearing.

Demented group has greater hearing problems.

```
SAS                                                                       14:02 TUESDAY, DECEMBER 24, 1985  140
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY EXPRES19

S2NO_PSY     EXPRES19

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .|      0|      1|      2|      3|      4|      5|      6|  TOTAL
---------+-------+-------+-------+-------+-------+-------+-------+-------+
ABSENT   |      1|      0|   1221|    115|     16|     16|      7|      2|   1377
         |      .|   -0.4|  313.6| -106.8|   -6.6|  -61.4| -126.3|  -12.0|
         |      .|   0.00|  36.49|   3.44|   0.48|   0.48|   0.21|   0.06|  41.15
         |      .|   0.00|  88.67|   8.35|   1.16|   1.16|   0.51|   0.15|
         |      .|   0.00|  55.37|  21.34|  29.09|   8.51|   2.16|   5.88|
---------+-------+-------+-------+-------+-------+-------+-------+-------+
PRESENT  |      0|      1|    984|    424|     39|    172|    317|     32|   1969
         |      .|    0.4| -313.6|  106.8|    6.6|   61.4|  126.3|   12.0|
         |      .|   0.03|  29.41|  12.67|   1.17|   5.14|   9.47|   0.96|  58.85
         |      .|   0.05|  49.97|  21.53|   1.98|   8.74|  16.10|   1.63|
         |      .| 100.00|  44.63|  78.66|  70.91|  91.49|  97.84|  94.12|
---------+-------+-------+-------+-------+-------+-------+-------+-------+
TOTAL           .       1    2205     539      55     188     324      34    3346
                .    0.03   65.90   16.11    1.64    5.62    9.68    1.02  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                   579.147    DF=   6  PROB=0.0001
PHI                            0.416
CONTINGENCY COEFFICIENT        0.384
CRAMER'S V                     0.416
LIKELIHOOD RATIO CHISQUARE   684.670    DF=   6  PROB=0.0001
```

Expressive Communication.

Demented group has greater Expression problem, Logical, since this was used to define the group.

```
SAS                                                                       14:02 TUESDAY, DECEMBER 24, 1985  141
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY RECEPT20

S2NO_PSY     RECEPT20

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .|      1|      2|      3|      4|      5|      6|  TOTAL
---------+-------+-------+-------+-------+-------+-------+-------+
ABSENT   |      2|   1266|     92|      6|      4|      3|      5|   1376
         |      .|  508.3| -322.7|   -4.7|  -23.1| -105.6|  -52.2|
         |      .|  37.85|   2.75|   0.18|   0.12|   0.09|   0.15|  41.14
         |      .|  92.01|   6.69|   0.44|   0.29|   0.22|   0.36|
         |      .|  68.73|   9.13|  23.08|   6.06|   1.14|   3.60|
---------+-------+-------+-------+-------+-------+-------+-------+
PRESENT  |      0|    576|    916|     20|     62|    261|    134|   1969
         |      .| -508.3|  322.7|    4.7|   23.1|  105.6|   52.2|
         |      .|  17.22|  27.38|   0.60|   1.85|   7.80|   4.01|  58.86
         |      .|  29.25|  46.52|   1.02|   3.15|  13.26|   6.81|
         |      .|  31.27|  90.87|  76.92|  93.94|  98.86|  96.40|
---------+-------+-------+-------+-------+-------+-------+-------+
TOTAL           .    1842    1008      26      66     264     139    3345
                .   55.07   30.13    0.78    1.97    7.89    4.16  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                  1298.080    DF=   5  PROB=0.0001
PHI                            0.623
CONTINGENCY COEFFICIENT        0.529
CRAMER'S V                     0.623
LIKELIHOOD RATIO CHISQUARE  1492.809    DF=   5  PROB=0.0001
```

Receptive Communication

Demented group has greater Reception problem, Logical, since this was used to define the group

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985  142
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY DECUGR23

S2NO_PSY     DECUGR23

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       0|       1|       2|       3|       4|  TOTAL
---------+--------+--------+--------+--------+--------+
ABSENT   |   1268 |     41 |     36 |     23 |     10 |   1378
         |   63.3 |  -13.8 |  -22.9 |  -21.9 |   -4.8 |
         |  37.88 |   1.22 |   1.08 |   0.69 |   0.30 |  41.17
         |  92.02 |   2.98 |   2.61 |   1.67 |   0.73 |
         |  43.34 |  30.83 |  25.17 |  21.10 |  27.78 |
---------+--------+--------+--------+--------+--------+
PRESENT  |   1658 |     92 |    107 |     86 |     26 |   1969
         |  -63.3 |   13.8 |   22.9 |   21.9 |    4.8 |
         |  49.54 |   2.75 |   3.20 |   2.57 |   0.78 |  58.83
         |  84.21 |   4.67 |   5.43 |   4.37 |   1.32 |
         |  56.66 |  69.17 |  74.83 |  78.90 |  72.22 |
---------+--------+--------+--------+--------+--------+
TOTAL        2926      133      143      109       36     3347
            87.42     3.97     4.27     3.26     1.08   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        47.437   DF=   4  PROB=0.0001
PHI                                0.119
CONTINGENCY COEFFICIENT            0.118
CRAMER'S V                         0.119
LIKELIHOOD RATIO CHISQUARE        50.302   DF=   4  PROB=0.0001
```

None

Decubitus Grade

Demented Group has Worse decubitus

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985  143
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY ANLGS125

S2NO_PSY     ANLGS125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |    858 |    520 |   1378
         | -151.5 |  151.5 |
         |  25.63 |  15.54 |  41.17
         |  62.26 |  37.74 |
         |  34.99 |  58.10 |
---------+--------+--------+
PRESENT  |   1594 |    375 |   1969
         |  151.5 | -151.5 |
         |  47.62 |  11.20 |  58.83
         |  80.96 |  19.05 |
         |  65.01 |  41.90 |
---------+--------+--------+
TOTAL        2452      895     3347
            73.26    26.74   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       144.583   DF=   1  PROB=0.0001
PHI                               -0.208
CONTINGENCY COEFFICIENT            0.203
CRAMER'S V                         0.208
LIKELIHOOD RATIO CHISQUARE       143.053   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       143.610   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Analgesic

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985  144
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY ABIOT125

S2N0_PSY     ABIOT125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1215 |    163 |   1378
         |   28.9 |  -28.9 |
         |  36.30 |   4.87 |  41.17
         |  88.17 |  11.83 |
         |  42.17 |  34.98 |
---------+--------+--------+
PRESENT  |   1666 |    303 |   1969
         |  -28.9 |   28.9 |
         |  49.78 |   9.05 |  58.83
         |  84.61 |  15.39 |
         |  57.83 |  65.02 |
---------+--------+--------+
TOTAL        2881      466     3347
            86.08    13.92   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        8.572     DF=    1  PROB=0.0034
PHI                               0.051
CONTINGENCY COEFFICIENT           0.051
CRAMER'S V                        0.051
LIKELIHOOD RATIO CHISQUARE        8.703     DF=    1  PROB=0.0032
CONTINUITY ADJ. CHI-SQUARE        8.277     DF=    1  PROB=0.0040
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0019
                    (2-TAIL)                          PROB=0.0036
```

Antibiotics

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985  145
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY ACOAG125

S2N0_PSY     ACOAG125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1342 |     36 |   1378
         |   -5.1 |    5.1 |
         |  40.10 |   1.08 |  41.17
         |  97.39 |   2.61 |
         |  41.01 |  48.00 |
---------+--------+--------+
PRESENT  |   1930 |     39 |   1969
         |    5.1 |   -5.1 |
         |  57.66 |   1.17 |  58.83
         |  98.02 |   1.98 |
         |  58.99 |  52.00 |
---------+--------+--------+
TOTAL        3272       75     3347
            97.76     2.24   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        1.477     DF=    1  PROB=0.2242
PHI                              -0.021
CONTINGENCY COEFFICIENT           0.021
CRAMER'S V                        0.021
LIKELIHOOD RATIO CHISQUARE        1.458     DF=    1  PROB=0.2272
CONTINUITY ADJ. CHI-SQUARE        1.203     DF=    1  PROB=0.2728
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.1356
                    (2-TAIL)                          PROB=0.2356
```

Anti coagulants

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  146
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY ACHVL125

S2NO_PSY     ACHVL125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1306 |     72 |   1378
         |   27.2 |  -27.2 |
         |  39.02 |   2.15 |  41.17
         |  94.78 |   5.22 |
         |  42.05 |  29.88 |
---------+--------+--------+
PRESENT  |   1800 |    169 |   1969
         |  -27.2 |   27.2 |
         |  53.78 |   5.05 |  58.83
         |  91.42 |   8.58 |
         |  57.95 |  70.12 |
---------+--------+--------+
TOTAL        3106      241     3347
            92.80     7.20   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       13.681   DF=    1  PROB=0.0002
PHI                               0.064
CONTINGENCY COEFFICIENT           0.064
CRAMER'S V                        0.064
LIKELIHOOD RATIO CHISQUARE       14.169   DF=    1  PROB=0.0002
CONTINUITY ADJ. CHI-SQUARE       13.183   DF=    1  PROB=0.0003
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0001
                    (2-TAIL)                        PROB=0.0002
```

Anticonvulsants

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  147
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY ADPRS125

S2NO_PSY     ADPRS125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1253 |    125 |   1378
         |  -33.2 |   33.2 |
         |  37.44 |   3.73 |  41.17
         |  90.93 |   9.07 |
         |  40.11 |  56.05 |
---------+--------+--------+
PRESENT  |   1871 |     98 |   1969
         |   33.2 |  -33.2 |
         |  55.90 |   2.93 |  58.83
         |  95.02 |   4.98 |
         |  59.89 |  43.95 |
---------+--------+--------+
TOTAL        3124      223     3347
            93.34     6.66   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       21.849   DF=    1  PROB=0.0001
PHI                              -0.081
CONTINGENCY COEFFICIENT           0.081
CRAMER'S V                        0.081
LIKELIHOOD RATIO CHISQUARE       21.436   DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       21.195   DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Antidepressants

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985  148
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2ND_PSY BY AHYP125

S2ND_PSY     AHYP125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1129 |    249 |   1378
         |  -66.6 |   66.6 |
         |  33.73 |   7.44 |  41.17
         |  81.93 |  18.07 |
         |  38.88 |  56.21 |
---------+--------+--------+
PRESENT  |   1775 |    194 |   1969
         |   66.6 |  -66.6 |
         |  53.03 |   5.80 |  58.83
         |  90.15 |   9.85 |
         |  61.12 |  43.79 |
---------+--------+--------+
TOTAL        2904      443     3347
            86.76    13.24   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        47.882   DF=   1  PROB=0.0001
PHI                               -0.119
CONTINGENCY COEFFICIENT            0.118
CRAMER'S V                         0.119
LIKELIHOOD RATIO CHISQUARE        46.864   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        46.949   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Antihypertensives

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985  149
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2ND_PSY BY APLAS125

S2ND_PSY     APLAS125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1363 |     15 |   1378
         |   -5.5 |    5.5 |
         |  40.72 |   0.45 |  41.17
         |  98.91 |   1.09 |
         |  41.00 |  65.22 |
---------+--------+--------+
PRESENT  |   1961 |      8 |   1969
         |    5.5 |   -5.5 |
         |  58.59 |   0.24 |  58.83
         |  99.59 |   0.41 |
         |  59.00 |  34.78 |
---------+--------+--------+
TOTAL        3324       23     3347
            99.31     0.69   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         5.529   DF=   1  PROB=0.0187
PHI                               -0.041
CONTINGENCY COEFFICIENT            0.041
CRAMER'S V                         0.041
LIKELIHOOD RATIO CHISQUARE         5.429   DF=   1  PROB=0.0198
CONTINUITY ADJ. CHI-SQUARE         4.574   DF=   1  PROB=0.0325
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0169
                    (2-TAIL)                        PROB=0.0311
```

Antineoplastic

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  150
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY APARK125

S2NO_PSY     APARK125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1297 |     81 |   1378
         |   10.4 |  -10.4 |
         |  38.75 |   2.42 |  41.17
         |  94.12 |   5.88 |
         |  41.50 |  36.49 |
---------+--------+--------+
PRESENT  |   1828 |    141 |   1969
         |  -10.4 |   10.4 |
         |  54.62 |   4.21 |  58.83
         |  92.84 |   7.16 |
         |  58.50 |  63.51 |
---------+--------+--------+
TOTAL        3125      222     3347
            93.37     6.63   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       2.154   DF=   1  PROB=0.1422
PHI                              0.025
CONTINGENCY COEFFICIENT          0.025
CRAMER'S V                       0.025
LIKELIHOOD RATIO CHISQUARE       2.181   DF=   1  PROB=0.1397
CONTINUITY ADJ. CHI-SQUARE       1.952   DF=   1  PROB=0.1623
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0806
                    (2-TAIL)                      PROB=0.1580
```

Anti parkinson

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  151
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY ARHUM125

S2NO_PSY     ARHUM125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1238 |    140 |   1378
         |  -54.8 |   54.8 |
         |  36.99 |   4.18 |  41.17
         |  89.84 |  10.16 |
         |  39.43 |  67.63 |
---------+--------+--------+
PRESENT  |   1902 |     67 |   1969
         |   54.8 |  -54.8 |
         |  56.83 |   2.00 |  58.83
         |  96.60 |   3.40 |
         |  60.57 |  32.37 |
---------+--------+--------+
TOTAL        3140      207     3347
            93.82     6.18   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      63.789   DF=   1  PROB=0.0001
PHI                             -0.138
CONTINGENCY COEFFICIENT          0.137
CRAMER'S V                       0.138
LIKELIHOOD RATIO CHISQUARE      62.879   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE      62.530   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0000
                    (2-TAIL)                      PROB=0.0000
```

Antirheamatic

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985  152
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2M0_PSY BY CARDC125

S2M0_PSY     CARDC125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |    912 |    466 |   1378
         |  -39.5 |   39.5 |
         |  27.25 |  13.92 |  41.17
         |  66.18 |  33.82 |
         |  39.46 |  44.98 |
---------+--------+--------+
PRESENT  |   1399 |    570 |   1969
         |   39.5 |  -39.5 |
         |  41.80 |  17.03 |  58.83
         |  71.05 |  28.95 |
         |  60.54 |  55.02 |
---------+--------+--------+
TOTAL        2311     1036     3347
            69.05    30.95   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         8.990   DF=   1  PROB=0.0027
PHI                               -0.052
CONTINGENCY COEFFICIENT            0.052
CRAMER'S V                         0.052
LIKELIHOOD RATIO CHISQUARE         8.952   DF=   1  PROB=0.0028
CONTINUITY ADJ. CHI-SQUARE         8.784   DF=   1  PROB=0.0031
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0016
                    (2-TAIL)                        PROB=0.0030
```

Cardiac Regulators

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985  153
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2M0_PSY BY DIURT125

S2M0_PSY     DIURT125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |    829 |    549 |   1378
         |  -73.5 |   73.5 |
         |  24.77 |  16.40 |  41.17
         |  60.16 |  39.84 |
         |  37.82 |  47.53 |
---------+--------+--------+
PRESENT  |   1363 |    606 |   1969
         |   73.5 |  -73.5 |
         |  40.72 |  18.11 |  58.83
         |  69.22 |  30.78 |
         |  62.18 |  52.47 |
---------+--------+--------+
TOTAL        2192     1155     3347
            65.49    34.51   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        29.465   DF=   1  PROB=0.0001
PHI                               -0.094
CONTINGENCY COEFFICIENT            0.093
CRAMER'S V                         0.094
LIKELIHOOD RATIO CHISQUARE        29.316   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        29.066   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Diuretics

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985  154
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY ELECT125

S2NO_PSY      ELECT125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1089 |    289 |   1378
         |  -25.5 |   25.5 |
         |  32.54 |   8.63 |  41.17
         |  79.03 |  20.97 |
         |  40.23 |  45.16 |
---------+--------+--------+
PRESENT  |   1618 |    351 |   1969
         |   25.5 |  -25.5 |
         |  48.34 |  10.49 |  58.83
         |  82.17 |  17.83 |
         |  59.77 |  54.84 |
---------+--------+--------+
TOTAL        2707      640     3347
            80.88    19.12   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          5.188   DF=   1  PROB=0.0227
PHI                                -0.039
CONTINGENCY COEFFICIENT             0.039
CRAMER'S V                          0.039
LIKELIHOOD RATIO CHISQUARE          5.166   DF=   1  PROB=0.0232
CONTINUITY ADJ. CHI-SQUARE          4.987   DF=   1  PROB=0.0255
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0130
                    (2-TAIL)                         PROB=0.0258
```

Electrolytes

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985  155
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY HYGLY125

S2NO_PSY      HYGLY125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1292 |     86 |   1378
         |   -7.8 |    7.8 |
         |  38.60 |   2.57 |  41.17
         |  93.76 |   6.24 |
         |  40.92 |  45.26 |
---------+--------+--------+
PRESENT  |   1865 |    104 |   1969
         |    7.8 |   -7.8 |
         |  55.72 |   3.11 |  58.83
         |  94.72 |   5.28 |
         |  59.08 |  54.74 |
---------+--------+--------+
TOTAL        3157      190     3347
            94.32     5.68   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          1.393   DF=   1  PROB=0.2380
PHI                                -0.020
CONTINGENCY COEFFICIENT             0.020
CRAMER'S V                          0.020
LIKELIHOOD RATIO CHISQUARE          1.381   DF=   1  PROB=0.2399
CONTINUITY ADJ. CHI-SQUARE          1.219   DF=   1  PROB=0.2695
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.1349
                    (2-TAIL)                         PROB=0.2551
```

Hypoglycemics

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  156
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF SZHO_PSY BY HYPNO125

SZHO_PSY     HYPNO125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1207 |    171 |   1378
         |  -58.2 |   58.2 |
         |  36.06 |   5.11 |  41.17
         |  87.59 |  12.41 |
         |  39.28 |  62.41 |
---------+--------+--------+
PRESENT  |   1866 |    103 |   1969
         |   58.2 |  -58.2 |
         |  55.75 |   3.08 |  58.83
         |  94.77 |   5.23 |
         |  60.72 |  37.59 |
---------+--------+--------+
TOTAL       3073      274     3347
           91.81     8.19   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          55.574    DF=    1  PROB=0.0001
PHI                                 -0.129
CONTINGENCY COEFFICIENT              0.128
CRAMER'S V                           0.129
LIKELIHOOD RATIO CHISQUARE          54.573    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          54.623    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0000
                    (2-TAIL)                            PROB=0.0000
```

Hypnotics

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  157
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF SZHO_PSY BY INSUL125

SZHO_PSY     INSUL125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1295 |     83 |   1378
         |   -9.3 |    9.3 |
         |  38.69 |   2.48 |  41.17
         |  93.98 |   6.02 |
         |  40.88 |  46.37 |
---------+--------+--------+
PRESENT  |   1873 |     96 |   1969
         |    9.3 |   -9.3 |
         |  55.96 |   2.87 |  58.83
         |  95.12 |   4.88 |
         |  59.12 |  53.63 |
---------+--------+--------+
TOTAL       3168      179     3347
           94.65     5.35   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           2.109    DF=    1  PROB=0.1464
PHI                                 -0.025
CONTINGENCY COEFFICIENT              0.025
CRAMER'S V                           0.025
LIKELIHOOD RATIO CHISQUARE           2.088    DF=    1  PROB=0.1484
CONTINUITY ADJ. CHI-SQUARE           1.889    DF=    1  PROB=0.1694
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0852
                    (2-TAIL)                            PROB=0.1600
```

Insulin

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1986  158
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY NARCO125

S2N0_PSY     NARCO125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT !  TOTAL
---------+--------+--------+
ABSENT   |   1259 |    119 |   1378
         |  -44.9 |   44.9 |
         |  37.62 |   3.56 |  41.17
         |  91.36 |   8.64 |
         |  39.75 |  66.11 |
---------+--------+--------+
PRESENT  |   1908 |     61 |   1969
         |   44.9 |  -44.9 |
         |  57.01 |   1.82 |  58.83
         |  96.90 |   3.10 |
         |  60.25 |  33.89 |
---------+--------+--------+
TOTAL        3167      180     3347
            94.62     5.38   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         48.852    DF=   1  PROB=0.0001
PHI                                -0.121
CONTINGENCY COEFFICIENT             0.120
CRAMER'S V                          0.121
LIKELIHOOD RATIO CHISQUARE         48.066    DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE         47.770    DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Narcotics

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1986  159
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY PSYTR125

S2N0_PSY     PSYTR125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1190 |    188 |   1378
         |   29.0 |  -29.0 |
         |  35.55 |   5.62 |  41.17
         |  86.36 |  13.64 |
         |  42.20 |  35.67 |
---------+--------+--------+
PRESENT  |   1630 |    339 |   1969
         |  -29.0 |   29.0 |
         |  48.70 |  10.13 |  58.83
         |  82.78 |  17.22 |
         |  57.80 |  64.33 |
---------+--------+--------+
TOTAL        2820      527     3347
            84.25    15.75   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          7.806    DF=   1  PROB=0.0052
PHI                                 0.048
CONTINGENCY COEFFICIENT             0.048
CRAMER'S V                          0.048
LIKELIHOOD RATIO CHISQUARE          7.905    DF=   1  PROB=0.0049
CONTINUITY ADJ. CHI-SQUARE          7.538    DF=   1  PROB=0.0060
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0029
                    (2-TAIL)                          PROB=0.0052
```

Psychotropics

slightly higher use
by demented group.

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1985  160
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY RESPY125

S2H0_PSY     RESPY125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1299 |     79 |   1378
         |  -25.1 |   25.1 |
         |  38.81 |   2.36 |  41.17
         |  94.27 |   5.73 |
         |  40.39 |  60.31 |
---------+--------+--------+
PRESENT  |   1917 |     52 |   1969
         |   25.1 |  -25.1 |
         |  57.28 |   1.55 |  58.83
         |  97.36 |   2.64 |
         |  59.61 |  39.69 |
---------+--------+--------+
TOTAL        3216      131     3347
            96.09     3.91   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        20.608    DF=    1  PROB=0.0001
PHI                               -0.078
CONTINGENCY COEFFICIENT            0.078
CRAMER'S V                         0.078
LIKELIHOOD RATIO CHISQUARE        20.199    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        19.764    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0000
                    (2-TAIL)                            PROB=0.0000
```

Respiratory Dilators

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1985  161
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY THYRD125

S2H0_PSY     THYRD125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1311 |     67 |   1378
         |   -9.4 |    9.4 |
         |  39.17 |   2.00 |  41.17
         |  95.14 |   4.86 |
         |  40.88 |  47.86 |
---------+--------+--------+
PRESENT  |   1896 |     73 |   1969
         |    9.4 |   -9.4 |
         |  56.65 |   2.18 |  58.83
         |  96.29 |   3.71 |
         |  59.12 |  52.14 |
---------+--------+--------+
TOTAL        3207      140     3347
            95.82     4.18   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         2.697    DF=    1  PROB=0.1006
PHI                               -0.028
CONTINGENCY COEFFICIENT            0.028
CRAMER'S V                         0.028
LIKELIHOOD RATIO CHISQUARE         2.663    DF=    1  PROB=0.1027
CONTINUITY ADJ. CHI-SQUARE         2.415    DF=    1  PROB=0.1201
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0807
                    (2-TAIL)                            PROB=0.1141
```

Thyroid Preparations

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1986  162
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY TRANQ125

S2H0_PSY     TRANQ125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1212 |    166 |   1378
         |   23.0 |  -23.0 |
         |  36.21 |   4.96 |  41.17
         |  87.95 |  12.05 |
         |  41.97 |  36.17 |
---------+--------+--------+
PRESENT  |   1676 |    293 |   1969
         |  -23.0 |   23.0 |
         |  50.07 |   8.75 |  58.83
         |  85.12 |  14.88 |
         |  58.03 |  63.83 |
---------+--------+--------+
TOTAL        2888      459     3347
            86.29    13.71   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           5.603   DF=   1  PROB=0.0180
PHI                                  0.041
CONTINGENCY COEFFICIENT              0.041
CRAMER'S V                           0.041
LIKELIHOOD RATIO CHISQUARE           5.573   DF=   1  PROB=0.0183
CONTINUITY ADJ. CHI-SQUARE           5.268   DF=   1  PROB=0.0217
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0108
                    (2-TAIL)                          PROB=0.0189
```

Tranquilizers

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1986  163
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY VASOD125

S2H0_PSY     VASOD125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1178 |    200 |   1378
         |  -37.8 |   37.8 |
         |  35.20 |   5.98 |  41.17
         |  85.49 |  14.51 |
         |  39.89 |  50.76 |
---------+--------+--------+
PRESENT  |   1775 |    194 |   1969
         |   37.8 |  -37.8 |
         |  53.03 |   5.80 |  58.83
         |  90.15 |   9.85 |
         |  60.11 |  49.24 |
---------+--------+--------+
TOTAL        2953      394     3347
            88.23    11.77   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          16.958   DF=   1  PROB=0.0001
PHI                                 -0.071
CONTINGENCY COEFFICIENT              0.071
CRAMER'S V                           0.071
LIKELIHOOD RATIO CHISQUARE          16.718   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          16.512   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0001
```

Vasodilators

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985  164
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY OMEDS125

S2NO_PSY     OMEDS125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |    446 |    932 |   1378
         |  -21.7 |   21.7 |
         |  13.33 |  27.85 |  41.17
         |  32.37 |  67.63 |
         |  39.26 |  42.15 |
---------+--------+--------+
PRESENT  |    690 |   1279 |   1969
         |   21.7 |  -21.7 |
         |  20.62 |  38.21 |  58.83
         |  35.04 |  64.96 |
         |  60.74 |  57.85 |
---------+--------+--------+
TOTAL        1136     2211     3347
            33.94    66.06   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       2.592   DF=   1  PROB=0.1074
PHI                             -0.028
CONTINGENCY COEFFICIENT          0.028
CRAMER'S V                       0.028
LIKELIHOOD RATIO CHISQUARE       2.598   DF=   1  PROB=0.1070
CONTINUITY ADJ. CHI-SQUARE       2.474   DF=   1  PROB=0.1158
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0577
                    (2-TAIL)                      PROB=0.1106
```

Other Medications.

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985  165
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY SEIZRE26

S2NO_PSY     SEIZRE26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |  .     |YES     |NO      |  TOTAL
---------+--------+--------+--------+
ABSENT   |      3 |      6 |   1369 |   1375
         |      . |   -4.7 |    4.7 |
         |      . |   0.18 |  40.95 |  41.13
         |      . |   0.44 |  99.56 |
         |      . |  23.08 |  41.27 |
---------+--------+--------+--------+
PRESENT  |      1 |     20 |   1948 |   1968
         |      . |    4.7 |   -4.7 |
         |      . |   0.60 |  58.27 |  58.87
         |      . |   1.02 |  98.98 |
         |      . |  76.92 |  58.73 |
---------+--------+--------+--------+
TOTAL           .       26     3317     3343
                .     0.78    99.22   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       3.527   DF=   1  PROB=0.0604
PHI                             -0.032
CONTINGENCY COEFFICIENT          0.032
CRAMER'S V                       0.032
LIKELIHOOD RATIO CHISQUARE       3.792   DF=   1  PROB=0.0515
CONTINUITY ADJ. CHI-SQUARE       2.816   DF=   1  PROB=0.0933
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0435
                    (2-TAIL)                      PROB=0.0716
```

Seizures

```
SAS                                                           14:02 TUESDAY, DECEMBER 24, 1985  166
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY DIZZY25

S2N0_PSY     DIZZY25

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .      |YES      |NO       |  TOTAL
---------+-----------+---------+---------+
ABSENT   |         3 |      74 |    1301 |   1375
         |         . |    17.7 |   -17.7 |
         |         . |    2.21 |   38.92 |  41.13
         |         . |    5.38 |   94.62 |
         |         . |   54.01 |   40.58 |
---------+-----------+---------+---------+
PRESENT  |         1 |      63 |    1905 |   1968
         |         . |   -17.7 |    17.7 |
         |         . |    1.88 |   56.98 |  58.87
         |         . |    3.20 |   96.80 |
         |         . |   45.99 |   59.42 |
---------+-----------+---------+---------+
TOTAL              .       137      3206     3343
                   .      4.10     95.90   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          9.793   DF=   1  PROB=0.0018
PHI                                 0.054
CONTINGENCY COEFFICIENT             0.054
CRAMER'S V                          0.054
LIKELIHOOD RATIO CHISQUARE          9.610   DF=   1  PROB=0.0019
CONTINUITY ADJ. CHI-SQUARE          9.246   DF=   1  PROB=0.0024
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0013
                    (2-TAIL)                         PROB=0.0025
```

Dizziness

```
SAS                                                           14:02 TUESDAY, DECEMBER 24, 1985  167
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY DCOLOR25

S2N0_PSY     DCOLOR25

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .      |YES      |NO       |  TOTAL
---------+-----------+---------+---------+
ABSENT   |         3 |      67 |    1308 |   1375
         |         . |   -15.3 |    15.3 |
         |         . |    2.00 |   39.13 |  41.13
         |         . |    4.87 |   95.13 |
         |         . |   33.50 |   41.62 |
---------+-----------+---------+---------+
PRESENT  |         1 |     133 |    1835 |   1968
         |         . |    15.3 |   -15.3 |
         |         . |    3.98 |   54.89 |  58.87
         |         . |    6.76 |   93.24 |
         |         . |   66.50 |   58.38 |
---------+-----------+---------+---------+
TOTAL              .       200      3143     3343
                   .      5.98     94.02   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          5.116   DF=   1  PROB=0.0237
PHI                                -0.039
CONTINGENCY COEFFICIENT             0.039
CRAMER'S V                          0.039
LIKELIHOOD RATIO CHISQUARE          5.228   DF=   1  PROB=0.0222
CONTINUITY ADJ. CHI-SQUARE          4.786   DF=   1  PROB=0.0287
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0137
                    (2-TAIL)                         PROB=0.0250
```

Discoloration

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  168
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY NUMBNS2B

S2N0_PSY     NUMBNS2B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |     .      |YES     |NO      |   TOTAL
---------+------------+--------+--------+
ABSENT   |          3 |     35 |   1340 |    1375
         |          . |   11.1 |  -11.1 |
         |          . |   1.05 |  40.08 |   41.13
         |          . |   2.55 |  97.45 |
         |          . |  60.34 |  40.79 |
---------+------------+--------+--------+
PRESENT  |          1 |     23 |   1945 |    1968
         |          . |  -11.1 |   11.1 |
         |          . |   0.69 |  58.18 |   58.87
         |          . |   1.17 |  98.83 |
         |          . |  39.66 |  59.21 |
---------+------------+--------+--------+
TOTAL               .       58     3285      3343
                    .     1.73    98.27    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                            8.999    DF=    1  PROB=0.0027
PHI                                   0.052
CONTINGENCY COEFFICIENT               0.052
CRAMER'S V                            0.052
LIKELIHOOD RATIO CHISQUARE            8.814    DF=    1  PROB=0.0030
CONTINUITY ADJ. CHI-SQUARE            8.210    DF=    1  PROB=0.0042
FISHER'S EXACT TEST (1-TAIL)                             PROB=0.0023
                    (2-TAIL)                             PROB=0.0043
```

Numbness

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  169
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY EDEMA2B

S2N0_PSY     EDEMA2B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |     .      |YES     |NO      |   TOTAL
---------+------------+--------+--------+
ABSENT   |          3 |    193 |   1182 |    1375
         |          . |  -13.5 |   13.5 |
         |          . |   5.77 |  35.36 |   41.13
         |          . |  14.04 |  85.96 |
         |          . |  38.45 |  41.61 |
---------+------------+--------+--------+
PRESENT  |          1 |    309 |   1659 |    1968
         |          . |   13.5 |  -13.5 |
         |          . |   9.24 |  49.63 |   58.87
         |          . |  15.70 |  84.30 |
         |          . |  61.55 |  58.39 |
---------+------------+--------+--------+
TOTAL               .      502     2841      3343
                    .    15.02    84.98    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                            1.758    DF=    1  PROB=0.1849
PHI                                  -0.023
CONTINGENCY COEFFICIENT               0.023
CRAMER'S V                            0.023
LIKELIHOOD RATIO CHISQUARE            1.768    DF=    1  PROB=0.1836
CONTINUITY ADJ. CHI-SQUARE            1.630    DF=    1  PROB=0.2017
FISHER'S EXACT TEST (1-TAIL)                             PROB=0.1006
                    (2-TAIL)                             PROB=0.2006
```

Edema

High Blood Pressure

```
SAS                                                                                  14:02 TUESDAY, DECEMBER 24, 1985  170
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY HIPRE26

S2NO_PSY     HIPRE26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |  .       |YES     |NO       |   TOTAL
---------+----------+--------+---------+
ABSENT   |        4 |    112 |    1262 |    1374
         |        . |   26.9 |   -26.9 |
         |        . |   3.35 |   37.77 |   41.13
         |        . |   8.15 |   91.85 |
         |        . |  54.11 |   40.27 |
---------+----------+--------+---------+
PRESENT  |        2 |     95 |    1872 |    1967
         |        . |  -26.9 |    26.9 |
         |        . |   2.84 |   56.03 |   58.87
         |        . |   4.83 |   95.17 |
         |        . |  45.89 |   59.73 |
---------+----------+--------+---------+
TOTAL             .      207      3134      3341
                  .     6.20     93.80 .  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       15.357    DF=   1  PROB=0.0001
PHI                               0.068
CONTINGENCY COEFFICIENT           0.068
CRAMER'S V                        0.068
LIKELIHOOD RATIO CHISQUARE       15.077    DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       14.791    DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0001
                    (2-TAIL)                        PROB=0.0001
```

Weight Loss

```
SAS                                                                                  14:02 TUESDAY, DECEMBER 24, 1985  171
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY WTLOSS26

S2NO_PSY     WTLOSS26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |  .       |YES     |NO       |   TOTAL
---------+----------+--------+---------+
ABSENT   |       49 |    141 |    1188 |    1329
         |        . |  -40.2 |    40.2 |
         |        . |   4.36 |   36.72 |   41.08
         |        . |  10.61 |   89.39 |
         |        . |  31.97 |   42.52 |
---------+----------+--------+---------+
PRESENT  |       63 |    300 |    1606 |    1906
         |        . |   40.2 |   -40.2 |
         |        . |   9.27 |   49.64 |   58.92
         |        . |  15.74 |   84.26 |
         |        . |  68.03 |   57.48 |
---------+----------+--------+---------+
TOTAL             .      441      2794      3235
                  .    13.63     86.37    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       17.504    DF=   1  PROB=0.0001
PHI                              -0.074
CONTINGENCY COEFFICIENT           0.073
CRAMER'S V                        0.074
LIKELIHOOD RATIO CHISQUARE       17.941    DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       17.071    DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  172
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY PAIN25

S2N0_PSY     PAIN25

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .    |YES     |NO      |  TOTAL
---------+------------+--------+--------+
ABSENT   |          3 |    163 |   1212 |   1375
         |          . |   54.0 |  -54.0 |
         |          . |   4.88 |  36.25 |  41.13
         |          . |  11.85 |  88.15 |
         |          . |  61.51 |  39.38 |
---------+------------+--------+--------+
PRESENT  |          1 |    102 |   1866 |   1968
         |          . |  -54.0 |   54.0 |
         |          . |   3.05 |  55.82 |  58.87
         |          . |   5.18 |  94.82 |
         |          . |  38.49 |  60.62 |
---------+------------+--------+--------+
TOTAL               .      265     3078     3343
                    .     7.93    92.07   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       49.384   DF=    1  PROB=0.0001
PHI                               0.122
CONTINGENCY COEFFICIENT           0.121
CRAMER'S V                        0.122
LIKELIHOOD RATIO CHISQUARE       48.444   DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       48.484   DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Severe Pain

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  173
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY DEHYDR25

S2N0_PSY     DEHYDR25

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .    |YES     |NO      |  TOTAL
---------+------------+--------+--------+
ABSENT   |          3 |      6 |   1369 |   1375
         |          . |  -12.5 |   12.5 |
         |          . |   0.18 |  40.95 |  41.13
         |          . |   0.44 |  99.56 |
         |          . |  13.33 |  41.51 |
---------+------------+--------+--------+
PRESENT  |          1 |     39 |   1929 |   1968
         |          . |   12.5 |  -12.5 |
         |          . |   1.17 |  57.70 |  58.87
         |          . |   1.98 |  98.02 |
         |          . |  86.67 |  58.49 |
---------+------------+--------+--------+
TOTAL               .       45     3298     3343
                    .     1.35    98.65   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       14.555   DF=    1  PROB=0.0001
PHI                              -0.066
CONTINGENCY COEFFICIENT           0.066
CRAMER'S V                        0.066
LIKELIHOOD RATIO CHISQUARE       16.844   DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       13.416   DF=    1  PROB=0.0002
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0001
```

Dehydration

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1985  174
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY CNTRAC25

S2N0_PSY     CNTRAC25

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .     |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        3 |    180 |   1195 |   1375
         |        . | -129.3 |  129.3 |
         |        . |   5.38 |  35.75 |  41.13
         |        . |  13.09 |  86.91 |
         |        . |  23.94 |  46.12 |
---------+----------+--------+--------+
PRESENT  |        1 |    572 |   1396 |   1968
         |        . |  129.3 | -129.3 |
         |        . |  17.11 |  41.76 |  58.87
         |        . |  29.07 |  70.93 |
         |        . |  76.06 |  53.88 |
---------+----------+--------+--------+
TOTAL             .      752     2591     3343
                  .    22.49    77.51   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      118.471   DF=   1  PROB=0.0001
PHI                              -0.188
CONTINGENCY COEFFICIENT           0.185
CRAMER'S V                        0.188
LIKELIHOOD RATIO CHISQUARE      124.838   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE      117.567   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0000
                    (2-TAIL)                       PROB=0.0000
```

Contractures

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1985  175
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY DYSPNA25

S2N0_PSY     DYSPNA25

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .     |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |       49 |     66 |   1263 |   1329
         |        . |    3.1 |   -3.1 |
         |        . |   2.04 |  39.04 |  41.08
         |        . |   4.97 |  95.03 |
         |        . |  43.14 |  40.98 |
---------+----------+--------+--------+
PRESENT  |       63 |     87 |   1819 |   1906
         |        . |   -3.1 |    3.1 |
         |        . |   2.69 |  56.23 |  58.92
         |        . |   4.56 |  95.44 |
         |        . |  56.86 |  59.02 |
---------+----------+--------+--------+
TOTAL             .      153     3082     3235
                  .     4.73    95.27   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        0.280   DF=   1  PROB=0.5968
PHI                               0.009
CONTINGENCY COEFFICIENT           0.009
CRAMER'S V                        0.009
LIKELIHOOD RATIO CHISQUARE        0.279   DF=   1  PROB=0.5973
CONTINUITY ADJ. CHI-SQUARE        0.198   DF=   1  PROB=0.6561
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.3258
                    (2-TAIL)                       PROB=0.6140
```

Dyspnea

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  176
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY BLEEDG26

S2NO_PSY     BLEEDG26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .      |YES      |NO       |  TOTAL
---------+--------------+---------+---------+
ABSENT   |      49      |      32 |    1297 |   1329
         |       .      |    -5.4 |     5.4 |
         |       .      |    0.99 |   40.09 |  41.08
         |       .      |    2.41 |   97.59 |
         |       .      |   35.16 |   41.25 |
---------+--------------+---------+---------+
PRESENT  |      83      |      59 |    1847 |   1906
         |       .      |     5.4 |    -5.4 |
         |       .      |    1.82 |   57.09 |  58.92
         |       .      |    3.10 |   96.90 |
         |       .      |   64.84 |   58.75 |
---------+--------------+---------+---------+
TOTAL            .           91      3144      3235
                 .         2.81     97.19    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           1.364   DF=    1  PROB=0.2446
PHI                                 -0.020
CONTINGENCY COEFFICIENT              0.020
CRAMER'S V                           0.020
LIKELIHOOD RATIO CHISQUARE           1.377   DF=    1  PROB=0.2406
CONTINUITY ADJ. CHI-SQUARE           1.118   DF=    1  PROB=0.2911
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.1464
                    (2-TAIL)                           PROB=0.2800
```

Bleeding

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  177
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY ULCER26

S2NO_PSY     ULCER26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .      |YES      |NO       |  TOTAL
---------+--------------+---------+---------+
ABSENT   |      49      |      18 |    1311 |   1329
         |       .      |     1.2 |    -1.2 |
         |       .      |    0.56 |   40.53 |  41.08
         |       .      |    1.35 |   98.65 |
         |       .      |   43.90 |   41.05 |
---------+--------------+---------+---------+
PRESENT  |      83      |      23 |    1883 |   1906
         |       .      |    -1.2 |     1.2 |
         |       .      |    0.71 |   58.21 |  58.92
         |       .      |    1.21 |   98.79 |
         |       .      |   56.10 |   58.95 |
---------+--------------+---------+---------+
TOTAL            .           41      3194      3235
                 .         1.27     98.73    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           0.136   DF=    1  PROB=0.7118
PHI                                  0.006
CONTINGENCY COEFFICIENT              0.006
CRAMER'S V                           0.006
LIKELIHOOD RATIO CHISQUARE           0.136   DF=    1  PROB=0.7127
CONTINUITY ADJ. CHI-SQUARE           0.044   DF=    1  PROB=0.8339
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.4136
                    (2-TAIL)                           PROB=0.7506
```

Stasis Ulcer

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  178
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY FALLS26

S2N0_PSY     FALLS26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .    |YES      |NO       |  TOTAL
---------+------------+---------+---------+
ABSENT   |       50   |      11 |    1317 |   1328
         |        .   |    -0.9 |     0.9 |
         |        .   |    0.34 |   40.74 |  41.08
         |        .   |    0.83 |   99.17 |
         |        .   |   37.93 |   41.10 |
---------+------------+---------+---------+
PRESENT  |       54   |      18 |    1887 |   1905
         |        .   |     0.9 |    -0.9 |
         |        .   |    0.56 |   58.37 |  58.92
         |        .   |    0.94 |   99.06 |
         |        .   |   62.07 |   58.90 |
---------+------------+---------+---------+
TOTAL                 .      29      3204     3233
                      .    0.90     99.10   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       0.120   DF=   1  PROB=0.7298
PHI                             -0.006
CONTINGENCY COEFFICIENT          0.006
CRAMER'S V                       0.006
LIKELIHOOD RATIO CHISQUARE       0.121   DF=   1  PROB=0.7284
CONTINUITY ADJ. CHI-SQUARE       0.024   DF=   1  PROB=0.8758
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.4424
                    (2-TAIL)                      PROB=0.8603
```

Frequent Falls

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  179
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY MED_PBLM

S2N0_PSY     MED_PBLM

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |        |        |        |        |4 OR MOR|
         |0       |1       |2       |3       |E       |  TOTAL
---------+--------+--------+--------+--------+--------+
ABSENT   |    636 |    406 |    202 |     89 |     45 |   1378
         |   74.4 |  -13.5 |  -29.8 |  -18.9 |  -12.2 |
         |  19.00 |  12.13 |   6.04 |   2.66 |   1.34 |  41.17
         |  46.15 |  29.46 |  14.66 |   6.46 |   3.27 |
         |  46.63 |  39.84 |  35.88 |  33.97 |  32.37 |
---------+--------+--------+--------+--------+--------+
PRESENT  |    728 |    613 |    361 |    173 |     94 |   1969
         |  -74.4 |   13.5 |   29.8 |   18.9 |   12.2 |
         |  21.75 |  18.31 |  10.79 |   5.17 |   2.81 |  58.83
         |  36.97 |  31.13 |  18.33 |   8.79 |   4.77 |
         |  53.37 |  60.16 |  64.12 |  66.03 |  67.63 |
---------+--------+--------+--------+--------+--------+
TOTAL        1364     1019      563      262      139     3347
            40.75    30.45    16.82     7.83     4.15   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      34.070   DF=   4  PROB=0.0001
PHI                              0.101
CONTINGENCY COEFFICIENT          0.100
CRAMER'S V                       0.101
LIKELIHOOD RATIO CHISQUARE      34.232   DF=   4  PROB=0.0001
```

Number of Medical Problems

More medical problems in Demented Group.

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  180
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY MOBILE27

S2NO_PSY     MOBILE27

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|       8|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |    509 |    218 |     73 |     66 |    311 |    144 |     54 |      3 |   1378
         |  209.3 |   69.8 |   -1.1 |  -50.5 |   84.1 | -154.9 | -145.7 |  -11.0 |
         |  15.21 |   6.51 |   2.18 |   1.97 |   9.29 |   4.30 |   1.61 |   0.09 |  41.17
         |  36.94 |  15.82 |   5.30 |   4.79 |  22.57 |  10.45 |   3.92 |   0.22 |
         |  69.92 |  60.56 |  40.56 |  23.32 |  56.44 |  19.83 |  11.13 |   8.82 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |    219 |    142 |    107 |    217 |    240 |    582 |    431 |     31 |   1969
         | -209.3 |  -69.8 |    1.1 |   50.5 |  -84.1 |  154.9 |  145.7 |   11.0 |
         |   6.54 |   4.24 |   3.20 |   6.48 |   7.17 |  17.39 |  12.88 |   0.93 |  58.83
         |  11.12 |   7.21 |   5.43 |  11.02 |  12.19 |  29.56 |  21.89 |   1.57 |
         |  30.08 |  39.44 |  59.44 |  76.68 |  43.56 |  80.17 |  88.87 |  91.18 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL         728      360      180      283      551      726      485       34     3347
            21.75    10.75     5.38     8.46    16.46    21.69    14.49     1.02   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     726.353   DF=   7  PROB=0.0001
PHI                              0.466
CONTINGENCY COEFFICIENT          0.422
CRAMER'S V                       0.466
LIKELIHOOD RATIO CHISQUARE     774.162   DF=   7  PROB=0.0001
```

Mobility

Higher mobility problems in demented group

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  181
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY TRNSFR28

S2NO_PSY     TRNSFR28

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      0 |    696 |    202 |     90 |    211 |    178 |      1 |   1378
         |      . |  289.1 |   56.5 |   -8.4 | -101.2 | -225.0 |  -10.1 |
         |      . |  20.80 |   6.04 |   2.69 |   6.31 |   5.32 |   0.03 |  41.18
         |      . |  50.51 |  14.66 |   6.53 |  15.31 |  12.92 |   0.07 |
         |      . |  70.45 |  57.22 |  37.66 |  27.84 |  18.14 |   3.70 |
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      1 |    292 |    151 |    149 |    547 |    803 |     26 |   1968
         |      . | -289.1 |  -56.5 |    8.4 |  101.2 |  225.0 |   10.1 |
         |      . |   8.73 |   4.51 |   4.45 |  16.35 |  24.00 |   0.78 |  58.82
         |      . |  14.84 |   7.67 |   7.57 |  27.79 |  40.80 |   1.32 |
         |      . |  29.55 |  42.78 |  62.34 |  72.16 |  81.86 |  96.30 |
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           .      988      353      239      758      981       27     3346
                .    29.53    10.55     7.14    22.65    29.32     0.81   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     674.342   DF=   5  PROB=0.0001
PHI                              0.449
CONTINGENCY COEFFICIENT          0.410
CRAMER'S V                       0.449
LIKELIHOOD RATIO CHISQUARE     701.581   DF=   5  PROB=0.0001
```

Transfer

More help needed with transfer by demented group.

```
SAS                                                                       14:02 TUESDAY, DECEMBER 24, 1985  182
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2HO_PSY BY EATING29

S2HO_PSY     EATING29

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|  TOTAL
---------+--------+--------+--------+--------+--------+
ABSENT   |     606|     645|      57|      65|       5|   1378
         |   298.9|    70.7|  -143.5|  -193.6|   -32.5|
         |   18.11|   19.27|    1.70|    1.94|    0.15|  41.17
         |   43.98|   46.81|    4.14|    4.72|    0.36|
         |   81.23|   46.24|   11.70|   10.35|    5.49|
---------+--------+--------+--------+--------+--------+
PRESENT  |     140|     750|     430|     563|      86|   1969
         |  -298.9|   -70.7|   143.5|   193.6|    32.5|
         |    4.18|   22.41|   12.85|   16.82|    2.57|  58.83
         |    7.11|   38.09|   21.84|   28.59|    4.37|
         |   18.77|   53.76|   88.30|   89.65|   94.51|
---------+--------+--------+--------+--------+--------+
TOTAL         746     1395      487      628       91    3347
            22.29    41.68    14.55    18.76     2.72  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     977.824   DF=   4  PROB=0.0001
PHI                              0.541
CONTINGENCY COEFFICIENT          0.475
CRAMER'S V                       0.541
LIKELIHOOD RATIO CHISQUARE    1080.462   DF=   4  PROB=0.0001
```

Eating
More assistance with
Eating by demented
group.

```
SAS                                                                       14:02 TUESDAY, DECEMBER 24, 1985  183
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2HO_PSY BY DRESSG30

S2HO_PSY     DRESSG30

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |     402|     420|     110|     208|     222|      16|   1378
         |   219.6|   190.7|    17.0|    22.3|  -410.8|   -38.6|
         |   12.01|   12.55|    3.29|    6.21|    6.63|    0.48|  41.17
         |   29.17|   30.48|    7.98|   15.09|   16.11|    1.16|
         |   90.74|   75.40|   48.67|   46.12|   14.44|   12.03|
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |      41|     137|     116|     243|    1315|     117|   1969
         |  -219.6|  -190.7|   -17.0|   -22.3|   410.8|    38.6|
         |    1.22|    4.09|    3.47|    7.26|   39.29|    3.50|  58.83
         |    2.08|    6.96|    5.89|   12.34|   66.79|    5.94|
         |    9.26|   24.60|   51.33|   53.88|   85.56|   87.97|
---------+--------+--------+--------+--------+--------+--------+
TOTAL         443      557      226      451     1537      133    3347
            13.24    16.64     6.75    13.47    45.92     3.97  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    1228.756   DF=   5  PROB=0.0001
PHI                              0.606
CONTINGENCY COEFFICIENT          0.518
CRAMER'S V                       0.606
LIKELIHOOD RATIO CHISQUARE    1337.557   DF=   5  PROB=0.0001
```

Dressing
More help needed in
dressing by demented
group.

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  184
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF SZMO_PSY BY BATHG31

SZMO_PSY     BATHG31

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .  |       1 |       2 |       3 |       4 |       5 |  TOTAL
---------+----------+---------+---------+---------+---------+---------+
ABSENT   |       1  |      72 |     501 |     150 |     324 |     330 |   1377
         |       .  |    41.1 |   282.3 |    47.1 |    74.2 |  -424.8 |
         |       .  |    2.15 |   14.97 |    4.48 |    9.68 |    9.86 |  41.15
         |       .  |    5.23 |   36.38 |   10.89 |   23.53 |   23.97 |
         |       .  |   96.00 |   86.38 |   60.00 |   53.38 |   17.99 |
---------+----------+---------+---------+---------+---------+---------+
PRESENT  |       0  |       3 |      79 |     100 |     283 |    1504 |   1969
         |       .  |   -41.1 |  -282.3 |   -47.1 |   -74.2 |   424.8 |
         |       .  |    0.09 |    2.36 |    2.99 |    8.46 |   44.95 |  58.85
         |       .  |    0.15 |    4.01 |    5.08 |   14.37 |   76.38 |
         |       .  |    4.00 |   13.62 |   40.00 |   46.62 |   82.01 |
---------+----------+---------+---------+---------+---------+---------+
TOTAL           .  :       75       580       250       607      1834     3346
                   :     2.24     17.33      7.47     18.14     54.81   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    1063.350   DF=   4  PROB=0.0001
PHI                              0.564
CONTINGENCY COEFFICIENT          0.491
CRAMER'S V                       0.564
LIKELIHOOD RATIO CHISQUARE    1142.432   DF=   4  PROB=0.0001
```

Bathing

more help needed
with Bathing by
Demented group.
Assistance for each
is generally high.
May be facility policy

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  185
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF SZMO_PSY BY TOILET32

SZMO_PSY     TOILET32

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |     735|     210|      30|     172|      82|      73|      76|   1378
         |   357.0|    62.6|     2.4|    10.2|   -64.2|  -202.0|  -166.1|
         |   21.96|    6.27|    0.90|    5.14|    2.45|    2.18|    2.27|  41.17
         |   53.34|   15.24|    2.18|   12.48|    5.95|    5.30|    5.52|
         |   80.07|   58.66|   44.78|   43.77|   23.10|   10.93|   12.93|
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |     183|     148|      37|     221|     273|     595|     512|   1969
         |  -357.0|   -62.6|    -2.4|   -10.2|    64.2|   202.0|   166.1|
         |    5.47|    4.42|    1.11|    6.60|    8.16|   17.78|   15.30|  58.83
         |    9.29|    7.52|    1.88|   11.22|   13.86|   30.22|   26.00|
         |   19.93|   41.34|   55.22|   56.23|   76.90|   89.07|   87.07|
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL          918      358       67      393      355      668      588     3347
             27.43    10.70     2.00    11.74    10.61    19.96    17.57   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    1113.838   DF=   6  PROB=0.0001
PHI                              0.577
CONTINGENCY COEFFICIENT          0.500
CRAMER'S V                       0.577
LIKELIHOOD RATIO CHISQUARE    1204.231   DF=   6  PROB=0.0001
```

Toileting

Demented group
needs greater
assistance with
Toileting

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1986  186
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF SZHO_PSY BY BLADDR33

SZHO_PSY     BLADDR33

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |     984 |    135 |    174 |      3 |     60 |     22 |   1378
         |   440.1 |   -8.3 | -392.9 |   -0.3 |  -35.9 |   -2.7 |
         |   29.40 |   4.03 |   5.20 |   0.09 |   1.79 |   0.66 |  41.17
         |   71.41 |   9.80 |  12.63 |   0.22 |   4.35 |   1.60 |
         |   74.49 |  38.79 |  12.64 |  37.50 |  25.75 |  36.67 |
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |     337 |    213 |   1203 |      5 |    173 |     38 |   1969
         |  -440.1 |    8.3 |  392.9 |    0.3 |   35.9 |    2.7 |
         |   10.07 |   6.36 |  35.94 |   0.15 |   5.17 |   1.14 |  58.83
         |   17.12 |  10.82 |  61.10 |   0.25 |   8.79 |   1.93 |
         |   25.51 |  61.21 |  87.36 |  62.50 |  74.25 |  63.33 |
---------+--------+--------+--------+--------+--------+--------+
TOTAL         1321      348     1377        8      233       60     3347
             39.47    10.40    41.14     0.24     6.96     1.79   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      1092.597     DF=   5  PROB=0.0001
PHI                                0.571
CONTINGENCY COEFFICIENT            0.496
CRAMER'S V                         0.571
LIKELIHOOD RATIO CHISQUARE      1169.719     DF=   5  PROB=0.0001
```

Bladder Control

Demented group
generally Incontinent
of Bladder

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1986  187
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF SZHO_PSY BY BOWEL34

SZHO_PSY     BOWEL34

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1 |       2 |       3 |       4 |       5 |  TOTAL
---------+---------+---------+---------+---------+---------+
ABSENT   |    1103 |     109 |     150 |       4 |      12 |   1378
         |   459.1 |   -53.6 |  -407.0 |     1.9 |    -0.4 |
         |   32.96 |    3.26 |    4.48 |    0.12 |    0.36 |  41.17
         |   80.04 |    7.91 |   10.89 |    0.29 |    0.87 |
         |   70.52 |   27.59 |   11.09 |   80.00 |   40.00 |
---------+---------+---------+---------+---------+---------+
PRESENT  |     461 |     286 |    1203 |       1 |      18 |   1969
         |  -459.1 |    53.6 |   407.0 |    -1.9 |     0.4 |
         |   13.77 |    8.54 |   35.94 |    0.03 |    0.54 |  58.83
         |   23.41 |   14.53 |   61.10 |    0.05 |    0.91 |
         |   29.48 |   72.41 |   88.91 |   20.00 |   60.00 |
---------+---------+---------+---------+---------+---------+
TOTAL         1564       395      1353         5        30     3347
             46.73     11.80     40.42      0.15      0.90   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      1095.154     DF=   4  PROB=0.0001
PHI                                0.572
CONTINGENCY COEFFICIENT            0.497
CRAMER'S V                         0.572
LIKELIHOOD RATIO CHISQUARE      1186.023     DF=   4  PROB=0.0001
```

Bowel Controll

Demented group
generally Incontinent
of Bowel

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  188
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY HYGIEN38

S2NO_PSY     HYGIEN38

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       0|       1|       2|       3|       4|       5|       7|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |       0|     383|     517|      87|     197|     194|       0|   1378
         |    -0.4|   213.8|   251.0|    -4.8|    -0.2|  -459.0|    -0.4|
         |    0.00|   11.44|   15.45|    2.60|    5.89|    5.80|    0.00|  41.17
         |    0.00|   27.79|   37.52|    6.31|   14.30|   14.08|    0.00|
         |    0.00|   93.19|   80.03|   39.01|   41.13|   12.23|    0.00|
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |       1|      28|     129|     136|     282|    1392|       1|   1969
         |     0.4|  -213.8|  -251.0|     4.8|     0.2|   459.0|     0.4|
         |    0.03|    0.84|    3.85|    4.06|    8.43|   41.59|    0.03|  58.83
         |    0.05|    1.42|    6.55|    6.91|   14.32|   70.70|    0.05|
         |  100.00|    6.81|   19.97|   60.99|   58.87|   87.77|  100.00|
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           1      411      646      223      479     1586        1     3347
             0.03    12.28    19.30     6.66    14.31    47.39     0.03   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                     1412.113   DF=   6  PROB=0.0001
PHI                               0.650
CONTINGENCY COEFFICIENT           0.545
CRAMER'S V                        0.650
LIKELIHOOD RATIO CHISQUARE     1666.941   DF=   6  PROB=0.0001
```

Personal Hygeine.

Demented group has very high assistance level in hygiene

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  189
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY LEARN38

S2NO_PSY     LEARN38

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       0|       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |       1|    1009|     298|      44|      12|      14|       0|   1378
         |     0.6|   581.6|   -78.7|  -221.1|  -220.2|   -61.8|    -0.4|
         |    0.03|   30.15|    8.90|    1.31|    0.36|    0.42|    0.00|  41.17
         |    0.07|   73.22|   21.63|    3.19|    0.87|    1.02|    0.00|
         |  100.00|   97.21|   32.57|    6.83|    2.13|    7.61|    0.00|
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |       0|      29|     617|     600|     552|     170|       1|   1969
         |    -0.6|  -581.6|    78.7|   221.1|   220.2|    61.8|     0.4|
         |    0.00|    0.87|   18.43|   17.93|   16.49|    5.08|    0.03|  58.83
         |    0.00|    1.47|   31.34|   30.47|   28.03|    8.63|    0.05|
         |    0.00|    2.79|   67.43|   93.17|   97.87|   92.39|  100.00|
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           1     1038      915      644      564      184        1     3347
             0.03    31.01    27.34    19.24    16.85     5.50     0.03   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                     2129.811   DF=   6  PROB=0.0001
PHI                               0.798
CONTINGENCY COEFFICIENT           0.624
CRAMER'S V                        0.798
LIKELIHOOD RATIO CHISQUARE     2579.206   DF=   6  PROB=0.0001
```

Learning Ability

Demented group, high level of Learning problems. Logical since used in defining the group.

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1996  190
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY MOTIVE37

S2N0_PSY     MOTIVE37

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |       2|     419|     615|     147|     126|      47|      22|   1376
         |       .|   239.2|   319.6|  -102.7|   -45.9|  -395.2|   -15.0|
         |       .|   12.52|   18.38|    4.39|    3.77|    1.41|    0.66|  41.14
         |       .|   30.45|   44.69|   10.68|    9.16|    3.42|    1.60|
         |       .|   95.88|   85.65|   24.22|   30.14|    4.37|   24.44|
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |       0|      18|     103|     460|     292|    1028|      68|   1970
         |       .|  -239.2|  -319.6|   102.7|    45.9|   395.2|    15.0|
         |       .|    0.54|    3.08|   13.75|    8.73|   30.73|    2.03|  58.88
         |       .|    0.91|    5.23|   23.35|   14.82|   52.21|    3.45|
         |       .|    4.12|   14.35|   75.78|   69.86|   95.63|   75.56|
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL            .      437      718      607      418     1076       90    3346
                 .    13.06    21.46    18.14    12.49    32.14     2.69  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                   1831.557   DF=   5  PROB=0.0001
PHI                             0.740
CONTINGENCY COEFFICIENT         0.595
CRAMER'S V                      0.740
LIKELIHOOD RATIO CHISQUARE   2120.956   DF=   5  PROB=0.0001
```

Motivation

Used in defining the group.

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1996  191
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY WANDER38

S2N0_PSY     WANDER38

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |    1337|      28|       8|       2|       3|       0|   1378
         |    91.2|   -60.1|    -6.8|   -16.5|    -6.1|    -1.6|
         |   39.95|    0.84|    0.24|    0.06|    0.09|    0.00|  41.17
         |   97.02|    2.03|    0.58|    0.15|    0.22|    0.00|
         |   44.18|   13.08|   22.22|    4.44|   13.64|    0.00|
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |    1689|     186|      28|      43|      19|       4|   1969
         |   -91.2|    60.1|     6.8|    16.5|     6.1|     1.6|
         |   50.46|    5.56|    0.84|    1.28|    0.57|    0.12|  58.83
         |   85.78|    9.45|    1.42|    2.18|    0.96|    0.20|
         |   55.82|   86.92|   77.78|   95.56|   86.36|  100.00|
---------+--------+--------+--------+--------+--------+--------+
TOTAL        3026      214       36       45       22        4    3347
            90.41     6.39     1.08     1.34     0.66     0.12  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    121.124   DF=   5  PROB=0.0001
PHI                             0.190
CONTINGENCY COEFFICIENT         0.187
CRAMER'S V                      0.190
LIKELIHOOD RATIO CHISQUARE    143.049   DF=   5  PROB=0.0001
```

Wandering

Demented group wanders more but generally not dangerously

```
SAS                                                                           14:02 TUESDAY, DECEMBER 24, 1985  192
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY VABUSE39

S2NO_PSY      VABUSE39

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|       8|       9|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |    1046 |    151 |     59 |     32 |     27 |     24 |     32 |      7 |      0 |   1378
         |   150.9 |    6.5 |  -64.9 |  -17.8 |-2[illegible].2 |  -50.5 |    4.8 |   -0.4 |   -0.4 |
         |   31.25 |   4.51 |   1.76 |   0.96 |   0.81 |   0.72 |   0.96 |   0.21 |   0.00 |  41.17
         |   75.91 |  10.96 |   4.28 |   2.32 |   1.96 |   1.74 |   2.32 |   0.51 |   0.00 |
         |   48.11 |  43.02 |  19.60 |  26.45 |  20.15 |  13.26 |  48.48 |  38.89 |   0.00 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |    1128 |    200 |    242 |     89 |    107 |    157 |     34 |     11 |      1 |   19[illegible]
         |  -150.9 |   -6.5 |   64.9 |   17.8 |   28.2 |   50.5 |   -4.8 |    0.4 |    0.4 |
         |   33.70 |   5.98 |   7.23 |   2.66 |   3.20 |   4.69 |   1.02 |   0.33 |   0.03 |  58.83
         |   57.29 |  10.16 |  12.29 |   4.52 |   5.43 |   7.97 |   1.73 |   0.56 |   0.05 |
         |   51.89 |  56.98 |  80.40 |  73.55 |  79.85 |  86.74 |  51.52 |  61.11 | 100.00 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL        2174      351      301      121      134      181       66       18        1     3347
            64.95    10.49     8.99     3.62     4.00     5.41     1.97     0.54     0.03   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                   197.278    DF=   8  PROB=0.0001
PHI                            0.243
CONTINGENCY COEFFICIENT        0.236
CRAMER'S V                     0.243
LIKELIHOOD RATIO CHISQUARE   216.102    DF=   8  PROB=0.0001
```

Verbal Abuse

Demented group more abusive.

```
SAS                                                                           14:02 TUESDAY, DECEMBER 24, 1985  193
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY AGRESS40

S2NO_PSY      AGRESS40

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|       8|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |    1226 |     55 |     29 |      9 |      9 |      5 |     43 |      2 |   1378
         |   173.3 |  -36.8 |  -97.8 |   -5.8 |  -24.8 |  -13.5 |    7.6 |   -2.1 |
         |   36.63 |   1.64 |   0.87 |   0.27 |   0.27 |   0.15 |   1.28 |   0.06 |  41.17
         |   88.97 |   3.99 |   2.10 |   0.65 |   0.65 |   0.36 |   3.12 |   0.15 |
         |   47.95 |  24.66 |   9.42 |  25.00 |  10.98 |  11.11 |  50.00 |  20.00 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |    1331 |    168 |    279 |     27 |     73 |     40 |     43 |      8 |   1969
         |  -173.3 |   36.8 |   97.8 |    5.8 |   24.8 |   13.5 |   -7.6 |    2.1 |
         |   39.77 |   5.02 |   8.34 |   0.81 |   2.18 |   1.20 |   1.28 |   0.24 |  58.83
         |   67.60 |   8.53 |  14.17 |   1.37 |   3.71 |   2.03 |   2.18 |   0.41 |
         |   52.05 |  75.34 |  90.58 |  75.00 |  89.02 |  88.89 |  50.00 |  80.00 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL        2557      223      308       36       82       45       86       10     3347
            76.40     6.66     9.20     1.08     2.45     1.34     2.57     0.30   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                   257.954    DF=   7  PROB=0.0001
PHI                            0.278
CONTINGENCY COEFFICIENT        0.267
CRAMER'S V                     0.278
LIKELIHOOD RATIO CHISQUARE   295.360    DF=   7  PROB=0.0001
```

Aggression

Demented group more aggressive.

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  194
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2MO_PSY BY SFCARE41

S2MO_PSY     SFCARE41

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       0|       1|       2|       3|       4|       5|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |       0|    1042|     181|      33|      78|      44|   1378
         |    -0.4|   487.4|    27.0|   -23.0|   -32.3|  -458.7|
         |    0.00|   31.13|    5.41|    0.99|    2.33|    1.31|  41.17
         |    0.00|   75.62|   13.13|    2.39|    5.66|    3.19|
         |    0.00|   77.36|   48.40|   24.26|   29.10|    3.60|
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |       1|     305|     193|     103|     190|    1177|   1969
         |     0.4|  -487.4|   -27.0|    23.0|    32.3|   458.7|
         |    0.03|    9.11|    5.77|    3.08|    5.68|   35.17|  58.83
         |    0.05|   15.49|    9.80|    5.23|    9.65|   59.78|
         |  100.00|   22.64|   51.60|   75.74|   70.90|   96.40|
---------+--------+--------+--------+--------+--------+--------+
TOTAL           1     1347      374      136      268     1221     3347
             0.03    40.24    11.17     4.06     8.01    36.48   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     1480.614    DF=    5  PROB=0.0001
PHI                               0.665
CONTINGENCY COEFFICIENT           0.554
CRAMER'S V                        0.665
LIKELIHOOD RATIO CHISQUARE     1723.032    DF=    5  PROB=0.0001
```

Refusal to Care for Oneself.

Used in defining the group.

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  195
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2MO_PSY BY REGRES42

S2MO_PSY     REGRES42

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |       0|    1161|     136|      35|      28|      17|       1|   1378
         |       .|   260.7|  -103.3|   -42.8|   -48.6|   -62.9|    -3.1|
         |       .|   34.70|    4.06|    1.05|    0.84|    0.51|    0.03|  41.18
         |       .|   84.25|    9.87|    2.54|    2.03|    1.23|    0.07|
         |       .|   53.11|   23.41|   18.52|   15.05|    8.76|   10.00|
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |       1|    1025|     445|     154|     158|     177|       9|   1968
         |       .|  -260.7|   103.3|    42.8|    48.6|    62.9|     3.1|
         |       .|   30.63|   13.30|    4.60|    4.72|    5.29|    0.27|  58.82
         |       .|   52.08|   22.61|    7.83|    8.03|    8.99|    0.46|
         |       .|   46.89|   76.59|   81.48|   84.95|   91.24|   90.00|
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           .     2186      581      189      186      194       10     3346
                .    65.33    17.36     5.65     5.56     5.80     0.30   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      384.877    DF=    5  PROB=0.0001
PHI                               0.339
CONTINGENCY COEFFICIENT           0.321
CRAMER'S V                        0.339
LIKELIHOOD RATIO CHISQUARE      419.212    DF=    5  PROB=0.0001
```

Regressive Behavior.

Demented Group somewhat more regressive behavior.

```
SAS                                                                            14:02 TUESDAY, DECEMBER 24, 1985  196
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY DEPRES43

S2NO_PSY     DEPRES43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |   .     |YES     |NO      |  TOTAL
---------+---------+--------+--------+
ABSENT   |        1|     106|    1271|   1377
         |        .|     4.8|    -4.8|
         |        .|    3.17|   37.96|  41.15
         |        .|    7.70|   92.30|
         |        .|   43.09|   41.00|
---------+---------+--------+--------+
PRESENT  |        0|     140|    1829|   1969
         |        .|    -4.8|     4.8|
         |        .|    4.18|   54.63|  58.85
         |        .|    7.11|   92.89|
         |        .|   56.91|   59.00|
---------+---------+--------+--------+
TOTAL             .      246     3100     3346
                  .     7.35    92.65   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          0.411    DF=    1  PROB=0.5215
PHI                                 0.011
CONTINGENCY COEFFICIENT             0.011
CRAMER'S V                          0.011
LIKELIHOOD RATIO CHISQUARE          0.409    DF=    1  PROB=0.5224
CONTINUITY ADJ. CHI-SQUARE          0.329    DF=    1  PROB=0.5662
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.2824
                    (2-TAIL)                           PROB=0.5449
```

Depression.

```
SAS                                                                            14:02 TUESDAY, DECEMBER 24, 1985  197
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY HALLUC43

S2NO_PSY     HALLUC43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |   .     |YES     |NO      |  TOTAL
---------+---------+--------+--------+
ABSENT   |        1|      45|    1332|   1377
         |        .|   -40.2|    40.2|
         |        .|    1.34|   39.81|  41.15
         |        .|    3.27|   96.73|
         |        .|   21.74|   42.43|
---------+---------+--------+--------+
PRESENT  |        0|     162|    1807|   1969
         |        .|    40.2|   -40.2|
         |        .|    4.84|   54.00|  58.85
         |        .|    8.23|   91.77|
         |        .|   78.26|   57.57|
---------+---------+--------+--------+
TOTAL             .      207     3139     3346
                  .     6.19    93.81   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         34.342    DF=    1  PROB=0.0001
PHI                                -0.101
CONTINGENCY COEFFICIENT             0.101
CRAMER'S V                          0.101
LIKELIHOOD RATIO CHISQUARE         37.058    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE         33.493    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0000
                    (2-TAIL)                           PROB=0.0000
```

Hallucenate.

More hallucenations by demented group.

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  198
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY PARAND43

S2NO_PSY     PARAND43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |   .    |YES     |NO      |  TOTAL
---------+--------+--------+--------+
ABSENT   |      1 |     88 |   1289 |   1377
         |      . |  -17.4 |   17.4 |
         |      . |   2.63 |  38.52 |  41.15
         |      . |   6.39 |  93.61 |
         |      . |  34.38 |  41.72 |
---------+--------+--------+--------+
PRESENT  |      0 |    168 |   1801 |   1969
         |      . |   17.4 |  -17.4 |
         |      . |   5.02 |  53.83 |  58.85
         |      . |   8.53 |  91.47 |
         |      . |  65.63 |  58.28 |
---------+--------+--------+--------+
TOTAL           .      256     3090     3346
                .     7.65    92.35   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         5.280    DF=   1  PROB=0.0216
PHI                               -0.040
CONTINGENCY COEFFICIENT            0.040
CRAMER'S V                         0.040
LIKELIHOOD RATIO CHISQUARE         5.358    DF=   1  PROB=0.0206
CONTINUITY ADJ. CHI-SQUARE         4.961    DF=   1  PROB=0.0259
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0124
                    (2-TAIL)                         PROB=0.0246
```

Paranoia

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  199
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY WDRAWN43

S2NO_PSY     WDRAWN43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |   .    |YES     |NO      |  TOTAL
---------+--------+--------+--------+
ABSENT   |      1 |    300 |   1077 |   1377
         |      . | -142.0 |  142.0 |
         |      . |   8.97 |  32.19 |  41.15
         |      . |  21.79 |  78.21 |
         |      . |  27.93 |  47.40 |
---------+--------+--------+--------+
PRESENT  |      0 |    774 |   1195 |   1969
         |      . |  142.0 | -142.0 |
         |      . |  23.13 |  35.71 |  58.85
         |      . |  39.31 |  60.69 |
         |      . |  72.07 |  52.60 |
---------+--------+--------+--------+
TOTAL           .     1074     2272     3346
                .    32.10    67.90   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       114.196    DF=   1  PROB=0.0001
PHI                               -0.185
CONTINGENCY COEFFICIENT            0.182
CRAMER'S V                         0.185
LIKELIHOOD RATIO CHISQUARE       117.416    DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       113.354    DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0000
                    (2-TAIL)                         PROB=0.0000
```

Withdrawn

demented group more withdrawn

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SAS                                                                                     14:02 TUESDAY, DECEMBER 24, 1985  200
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY DELUSN43

S2NO_PSY     DELUSN43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |     .      |YES      |NO       |  TOTAL
---------+------------+---------+---------+
ABSENT   |          1 |      52 |    1325 |   1377
         |          . |    -9.3 |     9.3 |
         |          . |    1.55 |   39.60 |  41.15
         |          . |    3.78 |   96.22 |
         |          . |   34.90 |   41.45 |
---------+------------+---------+---------+
PRESENT  |          0 |      97 |    1872 |   1969
         |          . |     9.3 |    -9.3 |
         |          . |    2.90 |   55.95 |  58.85
         |          . |    4.93 |   95.07 |
         |          . |   65.10 |   58.55 |
---------+------------+---------+---------+
TOTAL               .       149      3197     3346
                    .      4.45     95.55   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          2.519   DF=    1  PROB=0.1125
PHI                                -0.027
CONTINGENCY COEFFICIENT             0.027
CRAMER'S V                          0.027
LIKELIHOOD RATIO CHISQUARE          2.563   DF=    1  PROB=0.1094
CONTINUITY ADJ. CHI-SQUARE          2.256   DF=    1  PROB=0.1331
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0567
                    (2-TAIL)                          PROB=0.1253
```

Delusions -

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SAS                                                                                     14:02 TUESDAY, DECEMBER 24, 1985  201
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY HOARDS43

S2NO_PSY     HOARDS43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |     .      |YES      |NO       |  TOTAL
---------+------------+---------+---------+
ABSENT   |          2 |      99 |    1277 |   1376
         |          . |    20.4 |   -20.4 |
         |          . |    2.96 |   38.18 |  41.14
         |          . |    7.19 |   92.81 |
         |          . |   51.83 |   40.49 |
---------+------------+---------+---------+
PRESENT  |          0 |      92 |    1877 |   1969
         |          . |   -20.4 |    20.4 |
         |          . |    2.75 |   56.11 |  58.86
         |          . |    4.67 |   95.33 |
         |          . |   48.17 |   59.51 |
---------+------------+---------+---------+
TOTAL               .       191      3154     3345
                    .      5.71     94.29   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          9.571   DF=    1  PROB=0.0020
PHI                                 0.053
CONTINGENCY COEFFICIENT             0.053
CRAMER'S V                          0.053
LIKELIHOOD RATIO CHISQUARE          9.412   DF=    1  PROB=0.0022
CONTINUITY ADJ. CHI-SQUARE          9.109   DF=    1  PROB=0.0025
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0014
                    (2-TAIL)                          PROB=0.0024
```

Hoarding

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1986  202
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY MANIPU43

S2NO_PSY     MANIPU43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .    |YES     |NO      |  TOTAL
---------+---------+--------+--------+
ABSENT   |      47 |    225 |   1106 |   1331
         |       . |   64.7 |  -64.7 |
         |       . |   6.95 |  34.16 |  41.11
         |       . |  16.90 |  83.10 |
         |       . |  57.69 |  38.83 |
---------+---------+--------+--------+
PRESENT  |      62 |    165 |   1742 |   1907
         |       . |  -64.7 |   64.7 |
         |       . |   5.10 |  53.80 |  58.89
         |       . |   8.65 |  91.35 |
         |       . |  42.31 |  61.17 |
---------+---------+--------+--------+
TOTAL            .      390     2848     3238
                 .    12.04    87.96   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         50.390     DF=    1   PROB=0.0001
PHI                                 0.125
CONTINGENCY COEFFICIENT             0.124
CRAMER'S V                          0.125
LIKELIHOOD RATIO CHISQUARE         49.490     DF=    1   PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE         49.614     DF=    1   PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                             PROB=0.0000
                    (2-TAIL)                             PROB=0.0000
```

Manipulative.

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1986  203
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY BOWL148A

S2NO_PSY     BOWL148A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1076 |    302 |   1378
         |   95.9 |  -95.9 |
         |  32.15 |   9.02 |  41.17
         |  78.08 |  21.92 |
         |  45.25 |  31.17 |
---------+--------+--------+
PRESENT  |   1302 |    667 |   1969
         |  -95.9 |   95.9 |
         |  38.90 |  19.93 |  58.83
         |  66.12 |  33.88 |
         |  54.75 |  68.83 |
---------+--------+--------+
TOTAL        2378      969     3347
            71.05    28.95   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         56.367     DF=    1   PROB=0.0001
PHI                                 0.130
CONTINGENCY COEFFICIENT             0.129
CRAMER'S V                          0.130
LIKELIHOOD RATIO CHISQUARE         57.544     DF=    1   PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE         55.787     DF=    1   PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                             PROB=0.0000
                    (2-TAIL)                             PROB=0.0000
```

Bowel Program

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  204
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY DECU146A

S2NO_PSY     DECU146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1307 |     71 |   1378
         |   65.7 |  -65.7 |
         |  39.05 |   2.12 |  41.17
         |  94.85 |   5.15 |
         |  43.35 |  21.39 |
---------+--------+--------+
PRESENT  |   1708 |    261 |   1969
         |  -65.7 |   65.7 |
         |  51.03 |   7.80 |  58.83
         |  86.74 |  13.26 |
         |  56.65 |  78.61 |
---------+--------+--------+
TOTAL       3015      332     3347
           90.08     9.92   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     59.589   DF=   1  PROB=0.0001
PHI                             0.133
CONTINGENCY COEFFICIENT         0.132
CRAMER'S V                      0.133
LIKELIHOOD RATIO CHISQUARE     64.207   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE     58.686   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                     PROB=0.0000
                    (2-TAIL)                     PROB=0.0000
```

Decubitus Care

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  205
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY IMPN146A

S2NO_PSY     IMPN146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1328 |     50 |   1378
         |   57.9 |  -57.9 |
         |  39.68 |   1.49 |  41.17
         |  96.37 |   3.63 |
         |  43.05 |  19.08 |
---------+--------+--------+
PRESENT  |   1757 |    212 |   1969
         |  -57.9 |   57.9 |
         |  52.49 |   6.33 |  58.83
         |  89.23 |  10.77 |
         |  56.95 |  80.92 |
---------+--------+--------+
TOTAL       3085      262     3347
           92.17     7.83   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     57.283   DF=   1  PROB=0.0001
PHI                             0.131
CONTINGENCY COEFFICIENT         0.130
CRAMER'S V                      0.131
LIKELIHOOD RATIO CHISQUARE     62.736   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE     56.268   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                     PROB=0.0000
                    (2-TAIL)                     PROB=0.0000
```

Impaction

```
SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985  206
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY LAB148A

S2H0_PSY     LAB148A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1229 |    149 |   1378
         |   11.6 |  -11.6 |
         |  36.72 |   4.45 |  41.17
         |  89.19 |  10.81 |
         |  41.56 |  38.21 |
---------+--------+--------+
PRESENT  |   1728 |    241 |   1969
         |  -11.6 |   11.6 |
         |  51.63 |   7.20 |  58.83
         |  87.76 |  12.24 |
         |  58.44 |  61.79 |
---------+--------+--------+
TOTAL        2957      390     3347
            88.35    11.65   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          1.603   DF=   1  PROB=0.2054
PHI                                 0.022
CONTINGENCY COEFFICIENT             0.022
CRAMER'S V                          0.022
LIKELIHOOD RATIO CHISQUARE          1.614   DF=   1  PROB=0.2039
CONTINUITY ADJ. CHI-SQUARE          1.468   DF=   1  PROB=0.2257
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.1128
                    (2-TAIL)                         PROB=0.2068
```

Lab Tests

```
SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985  207
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY OXYG148A

S2H0_PSY     OXYG148A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1358 |     20 |   1378
         |   -2.7 |    2.7 |
         |  40.57 |   0.60 |  41.17
         |  98.55 |   1.45 |
         |  41.09 |  47.62 |
---------+--------+--------+
PRESENT  |   1947 |     22 |   1969
         |    2.7 |   -2.7 |
         |  58.17 |   0.66 |  58.83
         |  98.88 |   1.12 |
         |  58.91 |  52.38 |
---------+--------+--------+
TOTAL        3305       42     3347
            98.75     1.25   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          0.730   DF=   1  PROB=0.3929
PHI                                -0.015
CONTINGENCY COEFFICIENT             0.015
CRAMER'S V                          0.015
LIKELIHOOD RATIO CHISQUARE          0.721   DF=   1  PROB=0.3956
CONTINUITY ADJ. CHI-SQUARE          0.485   DF=   1  PROB=0.4860
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.2417
                    (2-TAIL)                         PROB=0.4316
```

Oxygen Therapy

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  208
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY PAIN14GA

S2NO_PSY     PAIN14GA

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1265 |    113 |   1378
         |  -36.0 |   36.0 |
         |  37.80 |   3.38 |  41.17
         |  91.80 |   8.20 |
         |  40.03 |  60.43 |
---------+--------+--------+
PRESENT  |   1895 |     74 |   1969
         |   36.0 |  -36.0 |
         |  56.62 |   2.21 |  58.83
         |  96.24 |   3.76 |
         |  59.97 |  39.57 |
---------+--------+--------+
TOTAL        3160      187     3347
            94.41     5.59   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        30.324   DF=   1  PROB=0.0001
PHI                               -0.095
CONTINGENCY COEFFICIENT            0.095
CRAMER'S V                         0.095
LIKELIHOOD RATIO CHISQUARE        29.735   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        29.488   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Pain Control

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  209
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY ROM14GA

S2NO_PSY     ROM14GA

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |    941 |    437 |   1378
         |  211.4 | -211.4 |
         |  28.11 |  13.06 |  41.17
         |  68.29 |  31.71 |
         |  53.10 |  27.75 |
---------+--------+--------+
PRESENT  |    831 |   1138 |   1969
         | -211.4 |  211.4 |
         |  24.83 |  34.00 |  58.83
         |  42.20 |  57.80 |
         |  46.90 |  72.25 |
---------+--------+--------+
TOTAL        1772     1575     3347
            52.94    47.06   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       221.375   DF=   1  PROB=0.0001
PHI                                0.257
CONTINGENCY COEFFICIENT            0.249
CRAMER'S V                         0.257
LIKELIHOOD RATIO CHISQUARE       225.144   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       220.329   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Range of Motion

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  210
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY REAL148A

S2H0_PSY     REAL148A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1173 |    205 |   1378
         |  180.0 | -180.0 |
         |  35.05 |   6.12 |  41.17
         |  85.12 |  14.88 |
         |  48.63 |  21.93 |
---------+--------+--------+
PRESENT  |   1239 |    730 |   1969
         | -180.0 |  180.0 |
         |  37.02 |  21.81 |  58.83
         |  62.93 |  37.07 |
         |  51.37 |  78.07 |
---------+--------+--------+
TOTAL        2412      935     3347
            72.06    27.94   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        198.422    DF=    1  PROB=0.0001
PHI                                 0.243
CONTINGENCY COEFFICIENT             0.237
CRAMER'S V                          0.243
LIKELIHOOD RATIO CHISQUARE        209.543    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        197.321    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0000
                    (2-TAIL)                           PROB=0.0000
```

Reality Orientation

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  211
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY STIM148A

S2H0_PSY     STIM148A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1287 |     91 |   1378
         |  129.3 | -129.3 |
         |  38.45 |   2.72 |  41.17
         |  93.40 |   6.60 |
         |  45.77 |  17.01 |
---------+--------+--------+
PRESENT  |   1525 |    444 |   1969
         | -129.3 |  129.3 |
         |  45.56 |  13.27 |  58.83
         |  77.45 |  22.55 |
         |  54.23 |  82.99 |
---------+--------+--------+
TOTAL        2812      535     3347
            84.02    15.98   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        153.487    DF=    1  PROB=0.0001
PHI                                 0.214
CONTINGENCY COEFFICIENT             0.209
CRAMER'S V                          0.214
LIKELIHOOD RATIO CHISQUARE        168.973    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        152.302    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0000
                    (2-TAIL)                           PROB=0.0000
```

Sensory Stimulation.

```
SAS                                                                            14:02 TUESDAY, DECEMBER 24, 1985  212
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2HO_PSY BY SKIN14BA

S2HO_PSY     SKIN14BA

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |    832 |    546 |   1378
         |  271.7 | -271.7 |
         |  24.86 |  16.31 |  41.17
         |  60.38 |  39.62 |
         |  61.13 |  27.49 |
---------+--------+--------+
PRESENT  |    529 |   1440 |   1969
         | -271.7 |  271.7 |
         |  15.81 |  43.02 |  58.83
         |  26.87 |  73.13 |
         |  38.87 |  72.51 |
---------+--------+--------+
TOTAL        1361     1986     3347
            40.66    59.34   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        377.299   DF=   1  PROB=0.0001
PHI                                 0.336
CONTINGENCY COEFFICIENT             0.318
CRAMER'S V                          0.336
LIKELIHOOD RATIO CHISQUARE        380.385   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        375.912   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0000
                    (2-TAIL)                         PROB=0.0000
```

Skin Care

```
SAS                                                                            14:02 TUESDAY, DECEMBER 24, 1985  213
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2HO_PSY BY SPLN14BA

S2HO_PSY     SPLN14BA

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1321 |     57 |   1378
         |   15.0 |  -15.0 |
         |  39.47 |   1.70 |  41.17
         |  95.86 |   4.14 |
         |  41.65 |  32.57 |
---------+--------+--------+
PRESENT  |   1851 |    118 |   1969
         |  -15.0 |   15.0 |
         |  55.30 |   3.53 |  58.83
         |  94.01 |   5.99 |
         |  58.35 |  67.43 |
---------+--------+--------+
TOTAL        3172      175     3347
            94.77     5.23   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          5.636   DF=   1  PROB=0.0176
PHI                                 0.041
CONTINGENCY COEFFICIENT             0.041
CRAMER'S V                          0.041
LIKELIHOOD RATIO CHISQUARE          5.783   DF=   1  PROB=0.0162
CONTINUITY ADJ. CHI-SQUARE          5.270   DF=   1  PROB=0.0217
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0102
                    (2-TAIL)                         PROB=0.0179
```

Splint Assistance

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  214
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY STER146A

S2N0_PSY     STER146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1301 |     77 |   1378
         |   27.2 |  -27.2 |
         |  38.87 |   2.30 |  41.17
         |  94.41 |   5.59 |
         |  42.05 |  30.43 |
---------+--------+--------+
PRESENT  |   1793 |    176 |   1969
         |  -27.2 |   27.2 |
         |  53.57 |   5.26 |  58.83
         |  91.06 |   8.94 |
         |  57.95 |  69.57 |
---------+--------+--------+
TOTAL        3094      253     3347
            92.44     7.56   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      13.025   DF=   1  PROB=0.0003
PHI                              0.062
CONTINGENCY COEFFICIENT          0.062
CRAMER'S V                       0.062
LIKELIHOOD RATIO CHISQUARE      13.458   DF=   1  PROB=0.0002
CONTINUITY ADJ. CHI-SQUARE      12.580   DF=   1  PROB=0.0004
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0002
                    (2-TAIL)                      PROB=0.0003
```

Sterile Dressing

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  215
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY AMBU146A

S2N0_PSY     AMBU146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1174 |    204 |   1378
         |   14.6 |  -14.6 |
         |  35.08 |   6.10 |  41.17
         |  85.20 |  14.80 |
         |  41.69 |  38.42 |
---------+--------+--------+
PRESENT  |   1642 |    327 |   1969
         |  -14.6 |   14.6 |
         |  49.06 |   9.77 |  58.83
         |  83.39 |  16.61 |
         |  58.31 |  61.58 |
---------+--------+--------+
TOTAL        2816      531     3347
            84.14    15.86   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       1.976   DF=   1  PROB=0.1599
PHI                              0.024
CONTINGENCY COEFFICIENT          0.024
CRAMER'S V                       0.024
LIKELIHOOD RATIO CHISQUARE       1.987   DF=   1  PROB=0.1587
CONTINUITY ADJ. CHI-SQUARE       1.842   DF=   1  PROB=0.1747
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0871
                    (2-TAIL)                      PROB=0.1636
```

Ambulation Training

Bowel/Bladder Training

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY BOBL148A

S2H0_PSY     BOBL148A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1326 |     52 |   1378
         |   21.3 |  -21.3 |
         |  39.62 |   1.55 |  41.17
         |  96.23 |   3.77 |
         |  41.84 |  29.21 |
---------+--------+--------+
PRESENT  |   1843 |    126 |   1969
         |  -21.3 |   21.3 |
         |  55.06 |   3.76 |  58.83
         |  93.60 |   6.40 |
         |  58.16 |  70.79 |
---------+--------+--------+
TOTAL        3169      178     3347
            94.68     5.32   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        11.099   DF=   1  PROB=0.0009
PHI                                0.058
CONTINGENCY COEFFICIENT            0.057
CRAMER'S V                         0.058
LIKELIHOOD RATIO CHISQUARE        11.535   DF=   1  PROB=0.0007
CONTINUITY ADJ. CHI-SQUARE        10.583   DF=   1  PROB=0.0011
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0005
                    (2-TAIL)                        PROB=0.0006
```

Rensselaer Polytechnic Institute

Dressing/Grooming Training

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY DRES148A

S2H0_PSY     DRES148A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1302 |     76 |   1378
         |  -27.8 |   27.8 |
         |  38.90 |   2.27 |  41.17
         |  94.48 |   5.52 |
         |  40.31 |  64.96 |
---------+--------+--------+
PRESENT  |   1928 |     41 |   1969
         |   27.8 |  -27.8 |
         |  57.60 |   1.22 |  58.83
         |  97.92 |   2.08 |
         |  59.69 |  35.04 |
---------+--------+--------+
TOTAL        3230      117     3347
            96.50     3.50   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        28.320   DF=   1  PROB=0.0001
PHI                               -0.092
CONTINGENCY COEFFICIENT            0.092
CRAMER'S V                         0.092
LIKELIHOOD RATIO CHISQUARE        27.622   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        27.312   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

IADL Training

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SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2M0_PSY BY ADL148A

S2M0_PSY     ADL148A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1339 |     39 |   1378
         |  -16.4 |   16.4 |
         |  40.01 |   1.17 |  41.17
         |  97.17 |   2.83 |
         |  40.67 |  70.91 |
---------+--------+--------+
PRESENT  |   1953 |     16 |   1969
         |   16.4 |  -16.4 |
         |  58.35 |   0.48 |  58.83
         |  99.19 |   0.81 |
         |  59.33 |  29.09 |
---------+--------+--------+
TOTAL        3292       55     3347
            98.36     1.64   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      20.417   DF=   1  PROB=0.0001
PHI                             -0.078
CONTINGENCY COEFFICIENT          0.078
CRAMER'S V                       0.078
LIKELIHOOD RATIO CHISQUARE      20.207   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE      19.188   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0000
                    (2-TAIL)                      PROB=0.0000
```

Meal Prep Training

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2M0_PSY BY MEAL148A

S2M0_PSY     MEAL148A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1340 |     38 |   1378
         |   -7.1 |    7.1 |
         |  40.04 |   1.14 |  41.17
         |  97.24 |   2.76 |
         |  40.95 |  50.67 |
---------+--------+--------+
PRESENT  |   1932 |     37 |   1969
         |    7.1 |   -7.1 |
         |  57.72 |   1.11 |  58.83
         |  98.12 |   1.88 |
         |  59.05 |  49.33 |
---------+--------+--------+
TOTAL        3272       75     3347
            97.76     2.24   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       2.855   DF=   1  PROB=0.0910
PHI                             -0.029
CONTINGENCY COEFFICIENT          0.029
CRAMER'S V                       0.029
LIKELIHOOD RATIO CHISQUARE       2.810   DF=   1  PROB=0.0937
CONTINUITY ADJ. CHI-SQUARE       2.468   DF=   1  PROB=0.1161
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0589
                    (2-TAIL)                      PROB=0.0873
```

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SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  220
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY TRFR14BA

S2NO_PSY     TRFR14BA

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1222 |    156 |   1378
         |  -25.9 |   25.9 |
         |  36.51 |   4.66 |  41.17
         |  88.68 |  11.32 |
         |  40.32 |  49.37 |
---------+--------+--------+
PRESENT  |   1809 |    160 |   1969
         |   25.9 |  -25.9 |
         |  54.05 |   4.78 |  58.83
         |  91.87 |   8.13 |
         |  59.68 |  50.63 |
---------+--------+--------+
TOTAL        3031      316     3347
            90.56     9.44   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      9.678   DF=   1  PROB=0.0019
PHI                            -0.054
CONTINGENCY COEFFICIENT         0.054
CRAMER'S V                      0.054
LIKELIHOOD RATIO CHISQUARE      9.548   DF=   1  PROB=0.0020
CONTINUITY ADJ. CHI-SQUARE      9.307   DF=   1  PROB=0.0023
FISHER'S EXACT TEST (1-TAIL)                     PROB=0.0012
                    (2-TAIL)                     PROB=0.0022
```

Transfer Training

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SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  221
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2NO_PSY BY TURN14BA

S2NO_PSY     TURN14BA

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1106 |    272 |   1378
         |  267.8 | -267.8 |
         |  33.04 |   8.13 |  41.17
         |  80.26 |  19.74 |
         |  54.32 |  20.75 |
---------+--------+--------+
PRESENT  |    930 |   1039 |   1969
         | -267.8 |  267.8 |
         |  27.79 |  31.04 |  58.83
         |  47.23 |  52.77 |
         |  45.68 |  79.25 |
---------+--------+--------+
TOTAL        2036     1311     3347
            60.83    39.17   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    371.183   DF=   1  PROB=0.0001
PHI                             0.333
CONTINGENCY COEFFICIENT         0.316
CRAMER'S V                      0.333
LIKELIHOOD RATIO CHISQUARE    388.987   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE    369.778   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                     PROB=0.0000
                    (2-TAIL)                     PROB=0.0000
```

Turning & Positioning

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  222
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY WUND146A

S2N0_PSY     WUND146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1281 |     97 |   1378
         |   22.4 |  -22.4 |
         |  38.27 |   2.90 |  41.17
         |  92.96 |   7.04 |
         |  41.90 |  33.45 |
---------+--------+--------+
PRESENT  |   1776 |    193 |   1969
         |  -22.4 |   22.4 |
         |  53.06 |   5.77 |  58.83
         |  90.20 |   9.80 |
         |  58.10 |  66.55 |
---------+--------+--------+
TOTAL       3057      290     3347
           91.34     8.66   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          7.819   DF=   1  PROB=0.0052
PHI                                 0.048
CONTINGENCY COEFFICIENT             0.048
CRAMER'S V                          0.048
LIKELIHOOD RATIO CHISQUARE          7.987   DF=   1  PROB=0.0047
CONTINUITY ADJ. CHI-SQUARE          7.474   DF=   1  PROB=0.0063
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0029
                    (2-TAIL)                         PROB=0.0060
```

Wound Care

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  223
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY OGEN146A

S2N0_PSY     OGEN146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1160 |    218 |   1378
         |  -27.4 |   27.4 |
         |  34.66 |   6.51 |  41.17
         |  84.18 |  15.82 |
         |  40.22 |  47.08 |
---------+--------+--------+
PRESENT  |   1724 |    245 |   1969
         |   27.4 |  -27.4 |
         |  51.51 |   7.32 |  58.83
         |  87.56 |  12.44 |
         |  59.78 |  52.92 |
---------+--------+--------+
TOTAL       2884      463     3347
           86.17    13.83   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          7.787   DF=   1  PROB=0.0054
PHI                                -0.048
CONTINGENCY COEFFICIENT             0.048
CRAMER'S V                          0.048
LIKELIHOOD RATIO CHISQUARE          7.681   DF=   1  PROB=0.0056
CONTINUITY ADJ. CHI-SQUARE          7.476   DF=   1  PROB=0.0063
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0032
                    (2-TAIL)                         PROB=0.0060
```

Other General Trmts.

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  224
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY CHEM14BB

S2N0_PSY     CHEM14BB

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1369 |      9 |   1378
         |   -4.5 |    4.5 |
         |  40.90 |   0.27 |  41.17
         |  99.35 |   0.65 |
         |  41.04 |  81.82 |
---------+--------+--------+
PRESENT  |   1967 |      2 |   1969
         |    4.5 |   -4.5 |
         |  58.77 |   0.06 |  58.83
         |  99.90 |   0.10 |
         |  58.96 |  18.18 |
---------+--------+--------+
TOTAL        3336       11     3347
            99.67     0.33   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                          7.528    DF=    1  PROB=0.0061
PHI                                -0.047
CONTINGENCY COEFFICIENT             0.047
CRAMER'S V                          0.047
LIKELIHOOD RATIO CHISQUARE          7.690    DF=    1  PROB=0.0056
CONTINUITY ADJ. CHI-SQUARE          5.939    DF=    1  PROB=0.0148
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0074
                    (2-TAIL)                           PROB=0.0102
```

Chemotherapy

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SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  225
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY DOSE14BB

S2N0_PSY     DOSE14BB

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1306 |     72 |   1378
         |   -9.8 |    9.8 |
         |  39.02 |   2.15 |  41.17
         |  94.78 |   5.22 |
         |  40.86 |  47.68 |
---------+--------+--------+
PRESENT  |   1890 |     79 |   1969
         |    9.8 |   -9.8 |
         |  56.47 |   2.36 |  58.83
         |  95.99 |   4.01 |
         |  59.14 |  52.32 |
---------+--------+--------+
TOTAL        3196      151     3347
            95.49     4.51   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          2.768    DF=    1  PROB=0.0962
PHI                                -0.029
CONTINGENCY COEFFICIENT             0.029
CRAMER'S V                          0.029
LIKELIHOOD RATIO CHISQUARE          2.734    DF=    1  PROB=0.0982
CONTINUITY ADJ. CHI-SQUARE          2.493    DF=    1  PROB=0.1143
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0578
                    (2-TAIL)                           PROB=0.1077
```

Drug Dose Change

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  226
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY MNTR146B

S2H0_PSY     MNTR146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1214 |    164 |   1378
         |    5.2 |   -5.2 |
         |  36.27 |   4.90 |  41.17
         |  88.10 |  11.90 |
         |  41.35 |  39.90 |
---------+--------+--------+
PRESENT  |   1722 |    247 |   1969
         |   -5.2 |    5.2 |
         |  51.45 |   7.38 |  58.83
         |  87.46 |  12.54 |
         |  58.65 |  60.10 |
---------+--------+--------+
TOTAL       2936      411     3347
           87.72    12.28   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        0.311   DF=   1  PROB=0.5769
PHI                               0.010
CONTINGENCY COEFFICIENT           0.010
CRAMER'S V                        0.010
LIKELIHOOD RATIO CHISQUARE        0.312   DF=   1  PROB=0.5764
CONTINUITY ADJ. CHI-SQUARE        0.254   DF=   1  PROB=0.6140
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.3076
                    (2-TAIL)                       PROB=0.5920
```

Monitoring

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  227
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY HOME146B

S2H0_PSY     HOME146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1377 |      1 |   1378
         |   -0.6 |    0.6 |
         |  41.14 |   0.03 |  41.17
         |  99.93 |   0.07 |
         |  41.15 | 100.00 |
---------+--------+--------+
PRESENT  |   1969 |      0 |   1969
         |    0.6 |   -0.6 |
         |  58.83 |   0.00 |  58.83
         | 100.00 |   0.00 |
         |  58.85 |   0.00 |
---------+--------+--------+
TOTAL       3346        1     3347
           99.97     0.03   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                        1.429   DF=   1  PROB=0.2319
PHI                              -0.021
CONTINGENCY COEFFICIENT           0.021
CRAMER'S V                        0.021
LIKELIHOOD RATIO CHISQUARE        1.775   DF=   1  PROB=0.1827
CONTINUITY ADJ. CHI-SQUARE        0.032   DF=   1  PROB=0.8576
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.4117
                    (2-TAIL)                       PROB=0.4117
```

Home Visitation.

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  228
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY ALMN1468

S2N0_PSY     ALMN1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1375 |      3 |   1378
         |    1.5 |   -1.5 |
         |  41.08 |   0.09 |  41.17
         |  99.78 |   0.22 |
         |  41.22 |  27.27 |
---------+--------+--------+
PRESENT  |   1961 |      8 |   1969
         |   -1.5 |    1.5 |
         |  58.59 |   0.24 |  58.83
         |  99.59 |   0.41 |
         |  58.78 |  72.73 |
---------+--------+--------+
TOTAL        3336       11     3347
            99.67     0.33   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                        0.880   DF=   1  PROB=0.3482
PHI                               0.016
CONTINGENCY COEFFICIENT           0.016
CRAMER'S V                        0.016
LIKELIHOOD RATIO CHISQUARE        0.925   DF=   1  PROB=0.3361
CONTINUITY ADJ. CHI-SQUARE        0.399   DF=   1  PROB=0.5278
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.2669
                    (2-TAIL)                       PROB=0.5416
```

Hyperalimentation.

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  229
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY SINJ1468

S2N0_PSY     SINJ1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1276 |    102 |   1378
         |   -9.8 |    9.8 |
         |  38.12 |   3.05 |  41.17
         |  92.60 |   7.40 |
         |  40.86 |  45.54 |
---------+--------+--------+
PRESENT  |   1847 |    122 |   1969
         |    9.8 |   -9.8 |
         |  55.18 |   3.65 |  58.83
         |  93.80 |   6.20 |
         |  59.14 |  54.46 |
---------+--------+--------+
TOTAL        3123      224     3347
            93.31     6.69   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        1.888   DF=   1  PROB=0.1694
PHI                              -0.024
CONTINGENCY COEFFICIENT           0.024
CRAMER'S V                        0.024
LIKELIHOOD RATIO CHISQUARE        1.872   DF=   1  PROB=0.1712
CONTINUITY ADJ. CHI-SQUARE        1.700   DF=   1  PROB=0.1923
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0966
                    (2-TAIL)                       PROB=0.1818
```

Single Injection

```
SAS                                                                14:02 TUESDAY, DECEMBER 24, 1985  230
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY MINJ146B

S2N0_PSY     MINJ146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1335 |     43 |   1378
         |    6.4 |   -6.4 |
         |  39.89 |   1.28 |  41.17
         |  96.88 |   3.12 |
         |  41.37 |  35.83 |
---------+--------+--------+
PRESENT  |   1892 |     77 |   1969
         |   -6.4 |    6.4 |
         |  56.53 |   2.30 |  58.83
         |  96.09 |   3.91 |
         |  58.63 |  64.17 |
---------+--------+--------+
TOTAL        3227      120     3347
            96.41     3.59   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          1.464   DF=   1  PROB=0.2263
PHI                                 0.021
CONTINGENCY COEFFICIENT             0.021
CRAMER'S V                          0.021
LIKELIHOOD RATIO CHISQUARE          1.486   DF=   1  PROB=0.2229
CONTINUITY ADJ. CHI-SQUARE          1.246   DF=   1  PROB=0.2646
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.1320
                    (2-TAIL)                         PROB=0.2571
```

Multiple Injection

```
SAS                                                                14:02 TUESDAY, DECEMBER 24, 1985  231
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY IOFL146B

S2N0_PSY     IOFL146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1318 |     60 |   1378
         |   75.0 |  -75.0 |
         |  39.38 |   1.79 |  41.17
         |  95.65 |   4.35 |
         |  43.66 |  18.29 |
---------+--------+--------+
PRESENT  |   1701 |    268 |   1969
         |  -75.0 |   75.0 |
         |  50.82 |   8.01 |  58.83
         |  86.39 |  13.61 |
         |  56.34 |  81.71 |
---------+--------+--------+
TOTAL        3019      328     3347
            90.20     9.80   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         78.586   DF=   1  PROB=0.0001
PHI                                 0.153
CONTINGENCY COEFFICIENT             0.151
CRAMER'S V                          0.153
LIKELIHOOD RATIO CHISQUARE         85.392   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE         77.541   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0000
                    (2-TAIL)                         PROB=0.0000
```

Intake/Output Fluids

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  232
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY NGFD146B

S2H0_PSY     NGFD146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1375 |      3 |   1378
         |   24.6 |  -24.6 |
         |  41.08 |   0.09 |  41.17
         |  99.78 |   0.22 |
         |  41.92 |   4.48 |
---------+--------+--------+
PRESENT  |   1905 |     64 |   1969
         |  -24.6 |   24.6 |
         |  56.92 |   1.91 |  58.83
         |  96.75 |   3.25 |
         |  58.08 |  95.52 |
---------+--------+--------+
TOTAL        3280       67     3347
            98.00     2.00   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          38.006   DF=   1  PROB=0.0001
PHI                                  0.107
CONTINGENCY COEFFICIENT              0.106
CRAMER'S V                           0.107
LIKELIHOOD RATIO CHISQUARE          49.493   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          36.476   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Nasal Gastric Feeding

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  233
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY PRTL146B

S2H0_PSY     PRTL146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1372 |      6 |   1378
         |    5.1 |   -5.1 |
         |  40.99 |   0.18 |  41.17
         |  99.56 |   0.44 |
         |  41.33 |  22.22 |
---------+--------+--------+
PRESENT  |   1948 |     21 |   1969
         |   -5.1 |    5.1 |
         |  58.20 |   0.63 |  58.83
         |  98.93 |   1.07 |
         |  58.67 |  77.78 |
---------+--------+--------+
TOTAL        3320       27     3347
            99.19     0.81   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           4.035   DF=   1  PROB=0.0446
PHI                                  0.035
CONTINGENCY COEFFICIENT              0.035
CRAMER'S V                           0.035
LIKELIHOOD RATIO CHISQUARE           4.360   DF=   1  PROB=0.0368
CONTINUITY ADJ. CHI-SQUARE           3.285   DF=   1  PROB=0.0699
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0318
                    (2-TAIL)                          PROB=0.0496
```

Parenteral Feeding

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  234
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2M0_PSY BY RADN146B

S2M0_PSY     RADN146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |   TOTAL
---------+--------+
ABSENT   |   1378 |    1378
         |    0.0 |
         |  41.17 |   41.17
         | 100.00 |
         |  41.17 |
---------+--------+
PRESENT  |   1969 |    1969
         |    0.0 |
         |  58.83 |   58.83
         | 100.00 |
         |  58.83 |
---------+--------+
TOTAL        3347     3347
           100.00   100.00
```

Radiation Trmts

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  235
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2M0_PSY BY RSPY146B

S2M0_PSY     RSPY146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1360 |     18 |   1378
         |    0.9 |   -0.9 |
         |  40.63 |   0.54 |  41.17
         |  98.69 |   1.31 |
         |  41.20 |  39.13 |
---------+--------+--------+
PRESENT  |   1941 |     28 |   1969
         |   -0.9 |    0.9 |
         |  57.99 |   0.84 |  58.83
         |  98.58 |   1.42 |
         |  58.80 |  60.87 |
---------+--------+--------+
TOTAL        3301       46     3347
            98.63     1.37   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         0.080   DF=   1  PROB=0.7770
PHI                                0.005
CONTINGENCY COEFFICIENT            0.005
CRAMER'S V                         0.005
LIKELIHOOD RATIO CHISQUARE         0.081   DF=   1  PROB=0.7765
CONTINUITY ADJ. CHI-SQUARE         0.018   DF=   1  PROB=0.8947
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.4506
                    (2-TAIL)                        PROB=0.8804
```

Respiratory Care

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  236
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY SUCT1468

S2H0_PSY     SUCT1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1375 |      3 |   1378
         |   15.1 |  -15.1 |
         |  41.08 |   0.09 |  41.17
         |  99.78 |   0.22 |
         |  41.63 |   6.82 |
---------+--------+--------+
PRESENT  |   1928 |     41 |   1969
         |  -15.1 |   15.1 |
         |  57.60 |   1.22 |  58.83
         |  97.92 |   2.08 |
         |  58.37 |  93.18 |
---------+--------+--------+
TOTAL        3303       44     3347
            98.69     1.31   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          21.724   DF=   1  PROB=0.0001
PHI                                  0.081
CONTINGENCY COEFFICIENT              0.080
CRAMER'S V                           0.081
LIKELIHOOD RATIO CHISQUARE          27.210   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          20.311   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Suctioning

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  237
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY DSCH1468

S2H0_PSY     DSCH1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1342 |     36 |   1378
         |  -18.3 |   18.3 |
         |  40.10 |   1.08 |  41.17
         |  97.39 |   2.61 |
         |  40.62 |  83.72 |
---------+--------+--------+
PRESENT  |   1962 |      7 |   1969
         |   18.3 |  -18.3 |
         |  58.62 |   0.21 |  58.83
         |  99.64 |   0.36 |
         |  59.38 |  16.28 |
---------+--------+--------+
TOTAL        3304       43     3347
            98.72     1.28   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          32.581   DF=   1  PROB=0.0001
PHI                                 -0.099
CONTINGENCY COEFFICIENT              0.098
CRAMER'S V                           0.099
LIKELIHOOD RATIO CHISQUARE          33.534   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          30.806   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Discharge Teaching

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  238
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY TRAC1468

S2H0_PSY     TRAC1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1376 |      2 |   1378
         |    0.9 |   -0.9 |
         |  41.11 |   0.06 |  41.17
         |  99.85 |   0.15 |
         |  41.20 |  28.57 |
---------+--------+--------+
PRESENT  |   1964 |      5 |   1969
         |   -0.9 |    0.9 |
         |  58.68 |   0.15 |  58.83
         |  99.75 |   0.25 |
         |  58.80 |  71.43 |
---------+--------+--------+
TOTAL       3340        7     3347
           99.79     0.21   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                        0.480   DF=   1  PROB=0.4877
PHI                               0.012
CONTINGENCY COEFFICIENT           0.012
CRAMER'S V                        0.012
LIKELIHOOD RATIO CHISQUARE        0.480   DF=   1  PROB=0.4883
CONTINUITY ADJ. CHI-SQUARE        0.086   DF=   1  PROB=0.7690
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.3946
                    (2-TAIL)                       PROB=0.7071
```

Track Care

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  239
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY TRFN1468

S2H0_PSY     TRFN1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1376 |      2 |   1378
         |    0.5 |   -0.5 |
         |  41.11 |   0.06 |  41.17
         |  99.85 |   0.15 |
         |  41.19 |  33.33 |
---------+--------+--------+
PRESENT  |   1965 |      4 |   1969
         |   -0.5 |    0.5 |
         |  58.71 |   0.12 |  58.83
         |  99.80 |   0.20 |
         |  58.81 |  66.67 |
---------+--------+--------+
TOTAL       3341        6     3347
           99.82     0.18   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                        0.152   DF=   1  PROB=0.6962
PHI                               0.007
CONTINGENCY COEFFICIENT           0.007
CRAMER'S V                        0.007
LIKELIHOOD RATIO CHISQUARE        0.156   DF=   1  PROB=0.6927
CONTINUITY ADJ. CHI-SQUARE        0.001   DF=   1  PROB=0.9803
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.5200
                    (2-TAIL)                       PROB=1.0000
```

Transfusion

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985  240
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY OSPC146B

S2H0_PSY     OSPC146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1290 |     88 |   1378
         |   13.7 |  -13.7 |
         |  38.54 |   2.63 |  41.17
         |  93.61 |   6.39 |
         |  41.61 |  35.63 |
---------+--------+--------+
PRESENT  |   1810 |    159 |   1969
         |  -13.7 |   13.7 |
         |  54.08 |   4.75 |  58.83
         |  91.92 |   8.08 |
         |  58.39 |  64.37 |
---------+--------+--------+
TOTAL        3100      247     3347
            92.62     7.38   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          3.384   DF=   1  PROB=0.0658
PHI                                 0.032
CONTINGENCY COEFFICIENT             0.032
CRAMER'S V                          0.032
LIKELIHOOD RATIO CHISQUARE          3.434   DF=   1  PROB=0.0639
CONTINUITY ADJ. CHI-SQUARE          3.141   DF=   1  PROB=0.0763
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0379
                    (2-TAIL)                         PROB=0.0688
```

Offer Special Trmts

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985  241
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY ASSESS47

S2H0_PSY     ASSESS47

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|       7|       8|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |       2|       9|      64|     166|     596|     358|     143|      15|      25|   1376
         |       .|    -5.4|     1.4|    -2.0|  -192.7|   153.3|    55.7|    -2.7|    -7.5|
         |       .|    0.27|    1.92|    4.97|   17.84|   10.72|    4.28|    0.45|    0.75|  41.19
         |       .|    0.65|    4.65|   12.06|   43.31|   26.02|   10.39|    1.09|    1.82|
         |       .|   25.71|   42.11|   40.69|   31.12|   72.03|   67.45|   34.88|   31.65|
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |       4|      26|      88|     242|    1319|     139|      69|      28|      54|   1965
         |       .|     5.4|    -1.4|     2.0|   192.7|  -153.3|   -55.7|     2.7|     7.5|
         |       .|    0.78|    2.63|    7.24|   39.48|    4.16|    2.07|    0.84|    1.62|  58.81
         |       .|    1.32|    4.48|   12.32|   67.12|    7.07|    3.51|    1.42|    2.75|
         |       .|   74.29|   57.89|   59.31|   68.88|   27.97|   32.55|   65.12|   68.35|
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL            .       35      152      408     1915      497      212       43       79     3341
                 .     1.05     4.55    12.21    57.32    14.88     6.35     1.29     2.36   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                   342.896   DF=   7  PROB=0.0001
PHI                            0.320
CONTINGENCY COEFFICIENT        0.305
CRAMER'S V                     0.320
LIKELIHOOD RATIO CHISQUARE   343.298   DF=   7  PROB=0.0001
```

Physician Visit for Assessment

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  242
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY ORDER47

S2N0_PSY     ORDER47

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .|      1|      2|      3|      4|      5|      6|      7|      8|  TOTAL
---------------------------------------------------------------------------------------
ABSENT   |      1|     10|     53|     90|    691|    395|    112|      1|     25|   1377
         |      .|   -0.7|    5.2|    9.3| -214.9|  153.3|   55.2|    0.2|   -7.5|
         |      .|   0.30|   1.58|   2.69|  20.66|  11.81|   3.35|   0.03|   0.75|  41.18
         |      .|   0.73|   3.85|   6.54|  50.18|  28.69|   8.13|   0.07|   1.82|
         |      .|  38.46|  45.69|  45.92|  31.41|  67.29|  81.16|  50.00|  31.65|
---------------------------------------------------------------------------------------
PRESENT  |      2|     16|     63|    106|   1509|    192|     26|      1|     54|   1967
         |      .|    0.7|   -5.2|   -9.3|  214.9| -153.3|  -55.2|   -0.2|    7.5|
         |      .|   0.48|   1.88|   3.17|  45.13|   5.74|   0.78|   0.03|   1.61|  58.82
         |      .|   0.81|   3.20|   5.39|  76.72|   9.76|   1.32|   0.05|   2.75|
         |      .|  61.54|  54.31|  54.08|  68.59|  32.71|  18.84|  50.00|  68.35|
---------------------------------------------------------------------------------------
TOTAL           .      26     116     196    2200     587     138       2      79    3344
                .    0.78    3.47    5.86   65.79   17.55    4.13    0.06    2.36  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                 348.907   DF=   7  PROB=0.0001
PHI                          0.323
CONTINGENCY COEFFICIENT      0.307
CRAMER'S V                   0.323
LIKELIHOOD RATIO CHISQUARE 360.822   DF=   7  PROB=0.0001
```

Physician Visits
for Orders

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  243
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY PROCS47

S2N0_PSY     PROCS47

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .|      1|      2|      3|      4|      5|      6|      7|  TOTAL
-------------------------------------------------------------------------------
ABSENT   |     50|      5|     19|     36|     55|     38|     60|   1115|   1328
         |      .|   -0.3|    2.6|    9.3|    4.4|   15.8|   -7.8|  -23.9|
         |      .|   0.15|   0.59|   1.11|   1.70|   1.18|   1.86|  34.51|  41.10
         |      .|   0.38|   1.43|   2.71|   4.14|   2.86|   4.52|  83.96|
         |      .|  38.46|  47.50|  55.38|  44.72|  70.37|  36.36|  40.24|
-------------------------------------------------------------------------------
PRESENT  |     66|      8|     21|     29|     68|     16|    105|   1656|   1903
         |      .|    0.3|   -2.6|   -9.3|   -4.4|  -15.8|    7.8|   23.9|
         |      .|   0.25|   0.65|   0.90|   2.10|   0.50|   3.25|  51.25|  58.90
         |      .|   0.42|   1.10|   1.52|   3.57|   0.84|   5.52|  87.02|
         |      .|  61.54|  52.50|  44.62|  55.28|  29.63|  63.64|  59.76|
-------------------------------------------------------------------------------
TOTAL           .      13      40      65     123      54     165    2771    3231
                .    0.40    1.24    2.01    3.81    1.67    5.11   85.76  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                  28.348   DF=   6  PROB=0.0001
PHI                          0.094
CONTINGENCY COEFFICIENT      0.093
CRAMER'S V                   0.094
LIKELIHOOD RATIO CHISQUARE  28.017   DF=   6  PROB=0.0001
```

Physician Visits
for Trmts

```
SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985  244
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY ADMN47

S2N0_PSY     ADMN47

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .  |      1 |      2 |      3 |      4 |      5 |      6 |      7 |  TOTAL
---------+----------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      52  |      1 |     16 |     61 |    203 |     60 |    254 |    731 |   1326
         |       .  |   -0.2 |    4.9 |   13.3 |  -72.7 |   14.8 |   42.8 |   -2.9 |
         |       .  |   0.03 |   0.50 |   1.89 |   6.29 |   1.86 |   7.87 |  22.65 |  41.09
         |       .  |   0.08 |   1.21 |   4.60 |  15.31 |   4.52 |  19.16 |  55.13 |
         |       .  |  33.33 |  59.26 |  52.59 |  30.25 |  54.55 |  49.42 |  40.93 |
---------+----------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      68  |      2 |     11 |     55 |    468 |     50 |    260 |   1055 |   1901
         |       .  |    0.2 |   -4.9 |  -13.3 |   72.7 |  -14.8 |  -42.8 |    2.9 |
         |       .  |   0.06 |   0.34 |   1.70 |  14.50 |   1.55 |   8.06 |  32.69 |  58.91
         |       .  |   0.11 |   0.58 |   2.89 |  24.62 |   2.63 |  13.68 |  55.50 |
         |       .  |  66.67 |  40.74 |  47.41 |  69.75 |  45.45 |  50.58 |  59.07 |
---------+----------+--------+--------+--------+--------+--------+--------+--------+
TOTAL            .         3       27      116      671      110      514     1786     3227
                 .      0.09     0.84     3.59    20.79     3.41    15.93    55.35   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     65.610   DF=    6  PROB=0.0001
PHI                             0.143
CONTINGENCY COEFFICIENT         0.141
CRAMER'S V                      0.143
LIKELIHOOD RATIO CHISQUARE     65.224   DF=    6  PROB=0.0001
```

Physician Visits
for Administrative

```
SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985  245
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2N0_PSY BY CMYSPT48

S2N0_PSY     CMYSPT48

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|       7|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |    1084|       4|       5|      49|      70|      31|     136|      19|    314
         |       .|     2.0|     1.5|    11.8|    25.4|     1.2|   -44.1|     2.1|
         |       .|    0.63|    0.79|    7.74|   11.06|    4.90|   21.48|    3.00|  49.61
         |       .|    1.27|    1.59|   15.61|   22.29|    9.87|   43.31|    6.05|
         |       .|  100.00|   71.43|   65.33|   77.78|   51.67|   37.47|   55.88|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |    1050|       0|       2|      26|      20|      29|     227|      15|    319
         |       .|    -2.0|    -1.5|   -11.8|   -25.4|    -1.2|    44.1|    -2.1|
         |       .|    0.00|    0.32|    4.11|    3.16|    4.58|   35.86|    2.37|  50.39
         |       .|    0.00|    0.63|    8.15|    6.27|    9.09|   71.16|    4.70|
         |       .|    0.00|   28.57|   34.67|   22.22|   48.33|   62.53|   44.12|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL            .        4        7       75       90       60      363       34      633
                 .     0.63     1.11    11.85    14.22     9.48    57.35     5.37   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                     63.431   DF=    6  PROB=0.0001
PHI                             0.317
CONTINGENCY COEFFICIENT         0.302
CRAMER'S V                      0.317
LIKELIHOOD RATIO CHISQUARE     67.018   DF=    6  PROB=0.0001
```

Community and
Informal Support.

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SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  246
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF SDM0_PSY BY HOUSPT49

SDM0_PSY     HOUSPT49

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |    1086|      76|      50|      30|     137|      19|    312
         |       .|    28.4|    16.3|     6.7|   -53.5|     2.1|
         |       .|   12.08|    7.95|    4.77|   21.78|    3.02|  49.60
         |       .|   24.36|   16.03|    9.62|   43.91|    6.09|
         |       .|   79.17|   73.53|   63.83|   35.68|   55.88|
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |    1062|      20|      18|      17|     247|      15|    317
         |       .|   -28.4|   -16.3|    -6.7|    53.5|    -2.1|
         |       .|    3.18|    2.86|    2.70|   39.27|    2.38|  50.40
         |       .|    6.31|    5.68|    5.36|   77.92|    4.73|
         |       .|   20.83|   26.47|   36.17|   64.32|   44.12|
---------+--------+--------+--------+--------+--------+--------+
TOTAL           .       96       68       47      384       34      629
                .    15.26    10.81     7.47    61.05     5.41   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      83.256    DF=   4  PROB=0.0001
PHI                              0.364
CONTINGENCY COEFFICIENT          0.342
CRAMER'S V                       0.364
LIKELIHOOD RATIO CHISQUARE      86.532    DF=   4  PROB=0.0001
```

Community Housing

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  247
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF SDM0_PSY BY INSPT50

SDM0_PSY     INSPT50

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|  TOTAL
---------+--------+--------+--------+--------+--------+
ABSENT   |    1085|     141|      88|      54|      30|    313
         |       .|     9.5|     1.2|   -13.5|     2.7|
         |       .|   22.35|   13.95|    8.56|    4.75|  49.60
         |       .|   45.05|   28.12|   17.25|    9.58|
         |       .|   53.21|   50.29|   39.71|   54.55|
---------+--------+--------+--------+--------+--------+
PRESENT  |    1061|     124|      87|      82|      25|    318
         |       .|    -9.5|    -1.2|    13.5|    -2.7|
         |       .|   19.65|   13.79|   13.00|    3.96|  50.40
         |       .|   38.99|   27.36|   25.79|    7.86|
         |       .|   46.79|   49.71|   60.29|   45.45|
---------+--------+--------+--------+--------+--------+
TOTAL           .      265      175      136       55      631
                .    42.00    27.73    21.55     8.72   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       7.278    DF=   3  PROB=0.0636
PHI                              0.107
CONTINGENCY COEFFICIENT          0.107
CRAMER'S V                       0.107
LIKELIHOOD RATIO CHISQUARE       7.319    DF=   3  PROB=0.0624
```

Informal Supports

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SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1985  248
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2ND_PSY BY PIMPMTS1

S2ND_PSY     PIMPMTS1

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|      1|      2|      3|      4|      5|      6|      7|      8|      9|     10|  TOTAL
---------+--------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
ABSENT   |   1075 |     54|    107|     29|     41|     20|     20|     16|      9|      6|      1|    303
         |      . |   -3.0|    1.8|  -26.5|   14.7|    7.3|    7.3|   -8.4|    4.6|    1.6|    0.5|
         |      . |   8.68|  17.20|   4.66|   6.59|   3.22|   3.22|   2.57|   1.45|   0.96|   0.16|  48.71
         |      . |  17.82|  35.31|   9.57|  13.53|   6.60|   6.60|   5.28|   2.97|   1.98|   0.33|
         |      . |  46.15|  49.54|  25.44|  75.93|  76.92|  76.92|  32.00| 100.00|  66.67| 100.00|
---------+--------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
PRESENT  |   1660 |     63|    109|     85|     13|      6|      6|     34|      0|      3|      0|    319
         |      . |    3.0|   -1.8|   26.5|  -14.7|   -7.3|   -7.3|    8.4|   -4.6|   -1.6|   -0.5|
         |      . |  10.13|  17.52|  13.67|   2.09|   0.96|   0.96|   5.47|   0.00|   0.48|   0.00|  51.29
         |      . |  19.75|  34.17|  26.65|   4.08|   1.88|   1.88|  10.66|   0.00|   0.94|   0.00|
         |      . |  53.85|  50.46|  74.56|  24.07|  23.08|  23.08|  68.00|   0.00|  33.33|   0.00|
---------+--------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
TOTAL           .      117     216     114      54      26      26      50       9       9       1      622
                .    18.81   34.73   18.33    8.68    4.18    4.18    8.04    1.45    1.45    0.16   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                     74.933   DF=   9  PROB=0.0001
PHI                             0.347
CONTINGENCY COEFFICIENT         0.328
CRAMER'S V                      0.347
LIKELIHOOD RATIO CHISQUARE     81.706   DF=   9  PROB=0.0001
```

Major Discharge Impedim

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SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1985  249
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2ND_PSY BY RUG

S2ND_PSY     RUG

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |SPEC A  |SPEC B  |REHAB A |REHAB B |COMP A  |COMP B  |COMP C  |COMP D  |  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      30|      33|      61|      63|      99|      89|      22|       2|   1378
         |     9.8|   -46.2|    33.0|    12.8|    46.1|    -1.6|   -43.5|   -12.0|
         |    0.90|    0.99|    1.82|    1.88|    2.96|    2.66|    0.66|    0.06|  41.17
         |    2.18|    2.39|    4.43|    4.57|    7.18|    6.46|    1.60|    0.15|
         |   61.22|   17.37|   89.71|   51.64|   75.57|   40.45|   13.84|    5.88|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      19|     157|       7|      59|      32|     131|     137|      32|   1969
         |    -9.8|    46.2|   -33.0|   -12.8|   -46.1|     1.6|    43.5|    12.0|
         |    0.57|    4.69|    0.21|    1.76|    0.96|    3.91|    4.09|    0.96|  58.83
         |    0.96|    7.97|    0.36|    3.00|    1.63|    6.65|    6.96|    1.63|
         |   38.78|   82.63|   10.29|   48.36|   24.43|   59.55|   86.16|   94.12|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL          49      190       68      122      131      220      159       34     3347
             1.46     5.68     2.03     3.65     3.91     6.57     4.75     1.02   100.00
(CONTINUED)

TABLE OF S2ND_PSY BY RUG

S2ND_PSY     RUG

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |MENTAL A|MENTAL B|MENTAL C|PHYS A  |PHYS B  |PHYS C  |PHYS D  |PHYS E  |  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      52|      28|       4|     672|      54|     154|      14|       1|   1378
         |     7.5|   -81.1|   -47.5|   315.0|    12.0|  -114.8|   -71.6|   -17.9|
         |    1.55|    0.84|    0.12|   20.08|    1.61|    4.60|    0.42|    0.03|  41.17
         |    3.77|    2.03|    0.29|   48.77|    3.92|   11.18|    1.02|    0.07|
         |   48.15|   10.57|    3.20|   77.51|   52.94|   23.58|    6.73|    2.17|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      56|     237|     121|     195|      48|     499|     194|      45|   1969
         |    -7.5|    81.1|    47.5|  -315.0|   -12.0|   114.8|    71.6|    17.9|
         |    1.67|    7.08|    3.62|    5.83|    1.43|   14.91|    5.80|    1.34|  58.83
         |    2.84|   12.04|    6.15|    9.90|    2.44|   25.34|    9.85|    2.29|
         |   51.85|   89.43|   96.80|   22.49|   47.06|   76.42|   93.27|   97.83|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL         108      265      125      867      102      653      208       46     3347
             3.23     7.92     3.73    25.90     3.05    19.51     6.21     1.37   100.00
```

RUG Classification

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SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985  250
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                   1126.519    DF=  15  PROB=0.0001
PHI                             0.580
CONTINGENCY COEFFICIENT         0.502
CRAMER'S V                      0.580
LIKELIHOOD RATIO CHISQUARE   1239.698    DF=  15  PROB=0.0001
```

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SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985  251
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S2H0_PSY BY ADLSUM

S2H0_PSY     ADLSUM

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       3 |       4 |       5 |       6 |       7 |       8 |       9 |      10 |  TOTAL
---------+---------+---------+---------+---------+---------+---------+---------+---------+
ABSENT   |     864 |      90 |     177 |     130 |      52 |      52 |      13 |       0 |   1378
         |   389.3 |    16.3 |    -7.4 |   -63.9 |  -109.8 |  -147.3 |   -73.5 |    -3.7 |
         |   25.81 |    2.69 |    5.29 |    3.88 |    1.55 |    1.55 |    0.39 |    0.00 |  41.17
         |   62.70 |    6.53 |   12.84 |    9.43 |    3.77 |    3.77 |    0.94 |    0.00 |
         |   74.93 |   50.28 |   39.51 |   27.60 |   13.23 |   10.74 |    6.19 |    0.00 |
---------+---------+---------+---------+---------+---------+---------+---------+---------+
PRESENT  |     289 |      89 |     271 |     341 |     341 |     432 |     197 |       9 |   1969
         |  -389.3 |   -16.3 |     7.4 |    63.9 |   109.8 |   147.3 |    73.5 |     3.7 |
         |    8.63 |    2.66 |    8.10 |   10.19 |   10.19 |   12.91 |    5.89 |    0.27 |  58.83
         |   14.68 |    4.52 |   13.76 |   17.32 |   17.32 |   21.94 |   10.01 |    0.46 |
         |   25.07 |   49.72 |   60.49 |   72.40 |   86.77 |   89.26 |   93.81 |  100.00 |
---------+---------+---------+---------+---------+---------+---------+---------+---------+
TOTAL         1153       179       448       471       393       484       210         9     3347
             34.45      5.35     13.39     14.07     11.74     14.46      6.27      0.27   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                   1008.203    DF=   7  PROB=0.0001
PHI                             0.549
CONTINGENCY COEFFICIENT         0.481
CRAMER'S V                      0.549
LIKELIHOOD RATIO CHISQUARE   1097.463    DF=   7  PROB=0.0001
```

<u>ADL</u> Score

Demented Group has higher ADL Score

These tables are the
same as previous two
sets but for the group
with 3 or more
dementia symptoms.

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  252
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY SEXB

S3M0_PSY     SEXB

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .  |      1  |      2  |  TOTAL
---------+----------+---------+---------+
ABSENT   |       4  |    457  |   1435  |   1892
         |       .  |   47.0  |  -47.0  |
         |       .  |  13.68  |  42.95  |  56.63
         |       .  |  24.15  |  75.85  |
         |       .  |  63.12  |  54.83  |
---------+----------+---------+---------+
PRESENT  |       2  |    267  |   1182  |   1449
         |       .  |  -47.0  |   47.0  |
         |       .  |   7.99  |  35.38  |  43.37
         |       .  |  18.43  |  81.57  |
         |       .  |  36.88  |  45.17  |
---------+----------+---------+---------+
TOTAL            .       724      2617     3341
                 .     21.67     78.33   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       15.860   DF=   1  PROB=0.0001
PHI                               0.069
CONTINGENCY COEFFICIENT           0.069
CRAMER'S V                        0.069
LIKELIHOOD RATIO CHISQUARE       16.035   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       15.524   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0000
                    (2-TAIL)                       PROB=0.0001
```

Sex

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SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  253
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY PAYORB

S3M0_PSY     PAYORB

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      1 |      2 |      3 |      4 |      5 |      6 |      7 |      8 |      9 |  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |   1293 |    177 |     65 |     13 |    294 |      5 |      5 |     15 |     29 |   1896
         |    2.0 |   -0.9 |   20.8 |    3.9 |  -37.4 |    1.0 |    0.5 |    4.2 |    5.8 |
         |  38.63 |   5.29 |   1.94 |   0.39 |   8.78 |   0.15 |   0.15 |   0.45 |   0.87 |  56.65
         |  68.20 |   9.34 |   3.43 |   0.69 |  15.51 |   0.26 |   0.26 |   0.79 |   1.53 |
         |  56.74 |  56.37 |  83.33 |  81.25 |  50.26 |  71.43 |  62.50 |  78.95 |  70.73 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |    986 |    137 |     13 |      3 |    291 |      2 |      3 |      4 |     12 |   1451
         |   -2.0 |    0.9 |  -20.8 |   -3.9 |   37.4 |   -1.0 |   -0.5 |   -4.2 |   -5.8 |
         |  29.46 |   4.09 |   0.39 |   0.09 |   8.69 |   0.06 |   0.09 |   0.12 |   0.36 |  43.35
         |  67.95 |   9.44 |   0.90 |   0.21 |  20.06 |   0.14 |   0.21 |   0.28 |   0.83 |
         |  43.26 |  43.63 |  16.67 |  18.75 |  49.74 |  28.57 |  37.50 |  21.05 |  29.27 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL        2279      314       78       16      585        7        8       19       41     3347
            68.09     9.38     2.33     0.48    17.48     0.21     0.24     0.57     1.22   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                       44.202   DF=   8  PROB=0.0001
PHI                               0.115
CONTINGENCY COEFFICIENT           0.114
CRAMER'S V                        0.115
LIKELIHOOD RATIO CHISQUARE       47.730   DF=   8  PROB=0.0001
```

Payor

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  254
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3H0_PSY BY MARITALS

S3H0_PSY     MARITALS

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       0|       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      1 |    232 |   1167 |    350 |     34 |    107 |      5 |   1896
         |    0.4 |  -62.9 |  -19.8 |   46.4 |    1.7 |   23.7 |    0.5 |
         |   0.03 |   6.93 |  34.87 |  10.46 |   1.02 |   3.20 |   0.15 |  56.65
         |   0.05 |  12.24 |  61.55 |  18.46 |   1.79 |   5.64 |   0.26 |
         | 100.00 |  46.12 |  55.70 |  65.30 |  59.65 |  72.79 |  62.50 |
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      0 |    271 |    928 |    186 |     23 |     40 |      3 |   1451
         |   -0.4 |   62.9 |   19.8 |  -46.4 |   -1.7 |  -23.7 |   -0.5 |
         |   0.00 |   8.10 |  27.73 |   5.56 |   0.69 |   1.20 |   0.09 |  43.35
         |   0.00 |  18.68 |  63.96 |  12.82 |   1.59 |   2.76 |   0.21 |
         |   0.00 |  53.88 |  44.30 |  34.70 |  40.35 |  27.21 |  37.50 |
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           1      503     2095      536       57      147        8     3347
             0.03    15.03    62.59    16.01     1.70     4.39     0.24   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                     56.462    DF=   6  PROB=0.0001
PHI                             0.130
CONTINGENCY COEFFICIENT         0.129
CRAMER'S V                      0.130
LIKELIHOOD RATIO CHISQUARE     57.728    DF=   6  PROB=0.0001
```

Marital Status

```
SAS                                                                                       14:02 TUESDAY, DECEMBER 24, 1985  255
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3H0_PSY BY ADLOC11A

S3H0_PSY     ADLOC11A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|       8|       9|      10|      11|      13|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |    168 |    165 |    143 |     62 |    160 |    183 |     25 |     45 |    925 |      1 |     13 |      6 |   1896
         |   34.3 |  -18.5 |   16.1 |    0.8 |  -48.5 |   20.4 |    8.6 |    2.5 |  -19.9 |    0.4 |    2.8 |    0.9 |
         |   5.02 |   4.93 |   4.27 |   1.85 |   4.78 |   5.47 |   0.75 |   1.34 |  27.64 |   0.03 |   0.39 |   0.18 |  56.65
         |   8.86 |   8.70 |   7.54 |   3.27 |   8.44 |   9.65 |   1.32 |   2.37 |  48.79 |   0.05 |   0.69 |   0.32 |
         |  71.19 |  50.93 |  63.84 |  57.41 |  43.48 |  63.76 |  86.21 |  60.00 |  55.46 | 100.00 |  72.22 |  66.67 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |     68 |    159 |     81 |     46 |    208 |    104 |      4 |     30 |    743 |      0 |      5 |      3 |   1451
         |  -34.3 |   18.5 |  -16.1 |   -0.8 |   48.5 |  -20.4 |   -8.6 |   -2.5 |   19.9 |   -0.4 |   -2.8 |   -0.9 |
         |   2.03 |   4.75 |   2.42 |   1.37 |   6.21 |   3.11 |   0.12 |   0.90 |  22.20 |   0.00 |   0.15 |   0.09 |  43.35
         |   4.69 |  10.96 |   5.58 |   3.17 |  14.33 |   7.17 |   0.28 |   2.07 |  51.21 |   0.00 |   0.34 |   0.21 |
         |  28.81 |  49.07 |  36.16 |  42.59 |  56.52 |  36.24 |  13.79 |  40.00 |  44.54 |   0.00 |  27.78 |  33.33 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL         236      324      224      108      368      287       29       75     1668        1       18        9     3347
             7.05     9.68     6.69     3.23    10.99     8.57     0.87     2.24    49.84     0.03     0.54     0.27   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     75.818    DF=  11  PROB=0.0001
PHI                             0.151
CONTINGENCY COEFFICIENT         0.149
CRAMER'S V                      0.151
LIKELIHOOD RATIO CHISQUARE     78.527    DF=  11  PROB=0.0001
```

Admission Location

Admission Reason

```
SAS                                                                                        14:02 TUESDAY, DECEMBER 24, 1985  256
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY REASON12

S3M0_PSY     REASON12

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      1|      2|      3|      4|      5|      6|      7|      8|      9|     10|     11|  TOTAL
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
ABSENT   |    265|     14|    882|    163|    295|    116|     50|      4|     44|     15|      1|   1896
         | -158.2|    3.8|   69.1|    5.0|    2.7|   30.5|   15.4|    1.2|   14.5|    5.4|   -0.1|
         |   7.92|   0.42|  26.35|   4.87|   8.81|   3.47|   1.49|   0.12|   1.31|   0.45|   0.03|  56.65
         |  13.98|   0.74|  46.52|   8.60|  15.56|   6.12|   2.64|   0.21|   2.32|   0.79|   0.05|
         |  35.48|  77.78|  61.46|  58.42|  57.17|  76.82|  81.97|  80.00|  84.62|  88.24|  50.00|
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
PRESENT  |    482|      4|    553|    116|    221|     35|     11|      1|      8|      2|      1|   1451
         |  158.2|   -3.8|  -69.1|   -5.0|   -2.7|  -30.5|  -15.4|   -1.2|  -14.5|   -5.4|    0.1|
         |  14.40|   0.12|  16.52|   3.47|   6.60|   1.05|   0.33|   0.03|   0.24|   0.06|   0.03|  43.35
         |  33.22|   0.28|  38.11|   7.99|  15.23|   2.41|   0.76|   0.07|   0.55|   0.14|   0.07|
         |  64.52|  22.22|  38.54|  41.58|  42.83|  23.18|  18.03|  20.00|  15.38|  11.76|  50.00|
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
TOTAL         747      18    1435     279     516     151      61       5      52      17       2    3347
            22.32    0.54   42.87    8.34   15.42    4.51    1.82    0.15    1.55    0.51    0.06  100.00
(CONTINUED)

TABLE OF S3M0_PSY BY REASON12

S3M0_PSY     REASON12

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |     12|     13|     14|     15|     16|     17|     18|     19|     20|     22|     23|  TOTAL
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
ABSENT   |      2|      5|     21|      2|      2|      4|      1|      6|      0|      1|      3|   1896
         |    0.9|    1.0|    8.5|   -1.4|    0.3|    1.2|    0.4|    1.5|   -0.6|   -0.7|   -0.4|
         |   0.06|   0.15|   0.63|   0.06|   0.06|   0.12|   0.03|   0.18|   0.00|   0.03|   0.09|  56.65
         |   0.11|   0.26|   1.11|   0.11|   0.11|   0.21|   0.05|   0.32|   0.00|   0.05|   0.16|
         | 100.00|  71.43|  95.45|  33.33|  66.67|  80.00| 100.00|  75.00|   0.00|  33.33|  50.00|
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
PRESENT  |      0|      2|      1|      4|      1|      1|      0|      2|      1|      2|      3|   1451
         |   -0.9|   -1.0|   -8.5|    1.4|   -0.3|   -1.2|   -0.4|   -1.5|    0.6|    0.7|    0.4|
         |   0.00|   0.06|   0.03|   0.12|   0.03|   0.03|   0.00|   0.06|   0.03|   0.06|   0.09|  43.35
         |   0.00|   0.14|   0.07|   0.28|   0.07|   0.07|   0.00|   0.14|   0.07|   0.14|   0.21|
         |   0.00|  28.57|   4.55|  66.67|  33.33|  20.00|   0.00|  25.00| 100.00|  66.67|  50.00|
---------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+-------+
TOTAL           2       7      22       6       3       5       1       8       1       3       6    3347
             0.06    0.21    0.66    0.18    0.09    0.15    0.03    0.24    0.03    0.09    0.18  100.00
```

```
SAS                                                                                        14:02 TUESDAY, DECEMBER 24, 1985  257
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                     241.303    DF=  21  PROB=0.0001
PHI                              0.269
CONTINGENCY COEFFICIENT          0.259
CRAMER'S V                       0.269
LIKELIHOOD RATIO CHISQUARE     253.253    DF=  21  PROB=0.0001
```

```
SAS                                                                 14:02 TUESDAY, DECEMBER 24, 1985  258
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S340_PSY BY COMA14

S340_PSY     COMA14

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .     |YES     |NO      |  TOTAL
---------+------------+--------+--------+
ABSENT   |          5 |      3 |   1888 |   1891
         |          . |  -19.6 |   19.6 |
         |          . |   0.09 |  56.53 |  56.62
         |          . |   0.16 |  99.84 |
         |          . |   7.50 |  57.21 |
---------+------------+--------+--------+
PRESENT  |          2 |     37 |   1412 |   1449
         |          . |   19.6 |  -19.6 |
         |          . |   1.11 |  42.28 |  43.38
         |          . |   2.55 |  97.45 |
         |          . |  92.50 |  42.79 |
---------+------------+--------+--------+
TOTAL               .       40     3300     3340
                    .     1.20    98.80   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         39.764   DF=   1  PROB=0.0001
PHI                                -0.109
CONTINGENCY COEFFICIENT             0.108
CRAMER'S V                          0.109
LIKELIHOOD RATIO CHISQUARE         44.376   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE         37.786   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0000
                    (2-TAIL)                         PROB=0.0000
```

Comatose

```
SAS                                                                 14:02 TUESDAY, DECEMBER 24, 1985  259
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S340_PSY BY TERM14

S340_PSY     TERM14

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .     |YES     |NO      |  TOTAL
---------+------------+--------+--------+
ABSENT   |          5 |     16 |   1875 |   1891
         |          . |   -7.2 |    7.2 |
         |          . |   0.48 |  56.14 |  56.62
         |          . |   0.85 |  99.15 |
         |          . |  39.02 |  56.84 |
---------+------------+--------+--------+
PRESENT  |          2 |     25 |   1424 |   1449
         |          . |    7.2 |   -7.2 |
         |          . |   0.75 |  42.63 |  43.38
         |          . |   1.73 |  98.27 |
         |          . |  60.98 |  43.16 |
---------+------------+--------+--------+
TOTAL               .       41     3299     3340
                    .     1.23    98.77   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          5.230   DF=   1  PROB=0.0222
PHI                                -0.040
CONTINGENCY COEFFICIENT             0.040
CRAMER'S V                          0.040
LIKELIHOOD RATIO CHISQUARE          5.178   DF=   1  PROB=0.0229
CONTINUITY ADJ. CHI-SQUARE          4.530   DF=   1  PROB=0.0333
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0170
                    (2-TAIL)                         PROB=0.0281
```

Terminally Ill

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  250
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3H0_PSY BY ALCOHL14

S3H0_PSY     ALCOHL14

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .    |YES     |NO      |  TOTAL
---------+---------+--------+--------+
ABSENT   |       9 |     72 |   1815 |   1887
         |       . |   13.1 |  -13.1 |
         |       . |   2.16 |  54.44 |  56.60
         |       . |   3.82 |  96.18 |
         |       . |  69.23 |  56.19 |
---------+---------+--------+--------+
PRESENT  |       4 |     32 |   1415 |   1447
         |       . |  -13.1 |   13.1 |
         |       . |   0.96 |  42.44 |  43.40
         |       . |   2.21 |  97.79 |
         |       . |  30.77 |  43.81 |
---------+---------+--------+--------+
TOTAL            .      104     3230     3334
                 .     3.12    96.88   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          6.973   DF=   1  PROB=0.0083
PHI                                 0.046
CONTINGENCY COEFFICIENT             0.046
CRAMER'S V                          0.046
LIKELIHOOD RATIO CHISQUARE          7.213   DF=   1  PROB=0.0072
CONTINUITY ADJ. CHI-SQUARE          6.463   DF=   1  PROB=0.0111
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0050
                    (2-TAIL)                         PROB=0.0068
```

Alcohol Abuse

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SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  251
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3H0_PSY BY DRUG14

S3H0_PSY     DRUG14

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .    |YES     |NO      |  TOTAL
---------+---------+--------+--------+
ABSENT   |      10 |      7 |   1879 |   1886
         |       . |    2.5 |   -2.5 |
         |       . |   0.21 |  56.36 |  56.57
         |       . |   0.37 |  99.63 |
         |       . |  87.50 |  56.49 |
---------+---------+--------+--------+
PRESENT  |       3 |      1 |   1447 |   1448
         |       . |   -2.5 |    2.5 |
         |       . |   0.03 |  43.40 |  43.43
         |       . |   0.07 |  99.93 |
         |       . |  12.50 |  43.51 |
---------+---------+--------+--------+
TOTAL            .        8     3326     3334
                 .     0.24    99.76   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                          3.123   DF=   1  PROB=0.0772
PHI                                 0.031
CONTINGENCY COEFFICIENT             0.031
CRAMER'S V                          0.031
LIKELIHOOD RATIO CHISQUARE          3.623   DF=   1  PROB=0.0570
CONTINUITY ADJ. CHI-SQUARE          1.988   DF=   1  PROB=0.1588
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0746
                    (2-TAIL)                         PROB=0.1490
```

Drug Abuse

151

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SAS                                                                                  14:02 TUESDAY, DECEMBER 24, 1986  282
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY VISION17

S3M0_PSY     VISION17

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |       2|     711|     875|     202|      91|      15|   1894
         |       .|   241.6|    -3.8|  -140.0|   -24.5|   -73.3|
         |       .|   21.26|   26.16|    6.04|    2.72|    0.45|  56.62
         |       .|   37.54|   46.20|   10.67|    4.80|    0.79|
         |       .|   85.77|   56.38|   33.44|   44.61|    9.62|
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |       0|     118|     677|     402|     113|     141|   1451
         |       .|  -241.6|     3.8|   140.0|    24.5|    73.3|
         |       .|    3.53|   20.24|   12.02|    3.38|    4.22|  43.38
         |       .|    8.13|   46.66|   27.71|    7.79|    9.72|
         |       .|   14.23|   43.62|   66.56|   55.39|   90.38|
---------+--------+--------+--------+--------+--------+--------+
TOTAL           .      829     1552      604      204      156     3345
                .    24.78    46.40    18.06     6.10     4.66   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      571.160   DF=   4  PROB=0.0001
PHI                               0.413
CONTINGENCY COEFFICIENT           0.382
CRAMER'S V                        0.413
LIKELIHOOD RATIO CHISQUARE      624.666   DF=   4  PROB=0.0001
```

Vision.

```
SAS                                                                                  14:02 TUESDAY, DECEMBER 24, 1986  283
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY HEAR18

S3M0_PSY     HEAR18

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       . |       1 |       2 |       3 |       4 |       5 |  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |       1|    1094|     525|     214|      54|       8|   1895
         |       .|   223.0|   -67.4|   -63.5|   -28.7|   -63.4|
         |       .|   32.70|   15.69|    6.40|    1.61|    0.24|  56.63
         |       .|   57.73|   27.70|   11.29|    2.85|    0.42|
         |       .|   71.13|   50.19|   43.67|   36.99|    6.35|
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |       0|     444|     521|     276|      92|     118|   1451
         |       .|  -223.0|    67.4|    63.5|    28.7|    63.4|
         |       .|   13.27|   15.57|    8.25|    2.75|    3.53|  43.37
         |       .|   30.60|   35.91|   19.02|    6.34|    8.13|
         |       .|   28.87|   49.81|   56.33|   63.01|   93.65|
---------+--------+--------+--------+--------+--------+--------+
TOTAL           .     1538     1046      490      146      126     3346
                .    45.97    31.26    14.64     4.36     3.77   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      336.480   DF=   4  PROB=0.0001
PHI                               0.317
CONTINGENCY COEFFICIENT           0.302
CRAMER'S V                        0.317
LIKELIHOOD RATIO CHISQUARE      357.411   DF=   4  PROB=0.0001
```

Hearing

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SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S340_PSY BY EXPRES19

S340_PSY     EXPRES19

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .|      0|      1|      2|      3|      4|      5|      6|  TOTAL
---------+-------+-------+-------+-------+-------+-------+-------+-------+
ABSENT   |      1|      0|   1624|    196|     25|     31|     10|      9|   1895
         |      .|   -0.6|  375.2| -109.3|   -6.1|  -75.5| -173.5|  -10.3|
         |      .|   0.00|  48.54|   5.86|   0.75|   0.93|   0.30|   0.27|  56.63
         |      .|   0.00|  85.70|  10.34|   1.32|   1.64|   0.53|   0.47|
         |      .|   0.00|  73.65|  36.36|  45.45|  16.49|   3.09|  26.47|
---------+-------+-------+-------+-------+-------+-------+-------+-------+
PRESENT  |      0|      1|    581|    343|     30|    157|    314|     25|   1451
         |      .|    0.6| -375.2|  109.3|    6.1|   75.5|  173.5|   10.3|
         |      .|   0.03|  17.36|  10.25|   0.90|   4.69|   9.38|   0.75|  43.37
         |      .|   0.07|  40.04|  23.64|   2.07|  10.82|  21.64|   1.72|
         |      .| 100.00|  26.35|  63.64|  54.55|  83.51|  96.91|  73.53|
---------+-------+-------+-------+-------+-------+-------+-------+-------+
TOTAL           .       1    2205     539      55     188     324      34     3346
                .    0.03   65.90   16.11    1.64    5.62    9.68    1.02   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    866.487   DF=   6  PROB=0.0001
PHI                             0.509
CONTINGENCY COEFFICIENT         0.454
CRAMER'S V                      0.509
LIKELIHOOD RATIO CHISQUARE    987.016   DF=   6  PROB=0.0001
```

Expressive Communication

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SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S340_PSY BY RECEPT20

S340_PSY     RECEPT20

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .|      1|      2|      3|      4|      5|      6|  TOTAL
---------+-------+-------+-------+-------+-------+-------+-------+
ABSENT   |      2|   1650|    199|     14|      4|      4|     23|   1894
         |      .|  607.0| -371.7|   -0.7|  -33.4| -146.5|  -55.7|
         |      .|  49.33|   5.95|   0.42|   0.12|   0.12|   0.69|  56.62
         |      .|  87.12|  10.51|   0.74|   0.21|   0.21|   1.21|
         |      .|  89.58|  19.74|  53.85|   6.06|   1.52|  16.55|
---------+-------+-------+-------+-------+-------+-------+-------+
PRESENT  |      0|    192|    809|     12|     62|    260|    116|   1451
         |      .| -607.0|  371.7|    0.7|   33.4|  146.5|   55.7|
         |      .|   5.74|  24.19|   0.36|   1.85|   7.77|   3.47|  43.38
         |      .|  13.23|  55.75|   0.83|   4.27|  17.92|   7.99|
         |      .|  10.42|  80.26|  46.15|  93.94|  98.48|  83.45|
---------+-------+-------+-------+-------+-------+-------+-------+
TOTAL           .    1842    1008      26      66     264     139     3345
                .   55.07   30.13    0.78    1.97    7.89    4.16   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                   1856.719   DF=   5  PROB=0.0001
PHI                             0.745
CONTINGENCY COEFFICIENT         0.598
CRAMER'S V                      0.745
LIKELIHOOD RATIO CHISQUARE   2112.989   DF=   5  PROB=0.0001
```

Receptive Communication

```
SAS                                                              14:02 TUESDAY, DECEMBER 24, 1996  286
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3H0_PSY BY DECUGR23

S3H0_PSY     DECUGR23

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       0|       1|       2|       3|       4|  TOTAL
---------+--------+--------+--------+--------+--------+
ABSENT   |    1733 |     60 |     50 |     39 |     14 |   1896
         |    75.5 |  -15.3 |  -31.0 |  -22.7 |   -6.4 |
         |   51.78 |   1.79 |   1.49 |   1.17 |   0.42 |  56.65
         |   91.40 |   3.16 |   2.64 |   2.06 |   0.74 |
         |   59.23 |  45.11 |  34.97 |  35.78 |  38.89 |
---------+--------+--------+--------+--------+--------+
PRESENT  |    1193 |     73 |     93 |     70 |     22 |   1451
         |   -75.5 |   15.3 |   31.0 |   22.7 |    6.4 |
         |   35.64 |   2.18 |   2.78 |   2.09 |   0.66 |  43.35
         |   82.22 |   5.03 |   6.41 |   4.82 |   1.52 |
         |   40.77 |  54.89 |  65.03 |  64.22 |  61.11 |
---------+--------+--------+--------+--------+--------+
TOTAL         2926      133      143      109       36     3347
             87.42     3.97     4.27     3.26     1.08   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      66.463   DF=   4  PROB=0.0001
PHI                              0.141
CONTINGENCY COEFFICIENT          0.140
CRAMER'S V                       0.141
LIKELIHOOD RATIO CHISQUARE      66.026   DF=   4  PROB=0.0001
```

Decubitus Grade

None

```
SAS                                                              14:02 TUESDAY, DECEMBER 24, 1996  287
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3H0_PSY BY ANLGS123

S3H0_PSY     ANLGS123

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |    1239 |    657 |   1896
         |  -150.0 |  150.0 |
         |   37.02 |  19.63 |  56.65
         |   65.35 |  34.65 |
         |   50.53 |  73.41 |
---------+--------+--------+
PRESENT  |    1213 | [illegible] |   1461
         |   150.0 | -15[illegible] |
         |   36.24 |   7.11 |  43.35
         |   83.60 |  16.40 |
         |   49.47 |  26.59 |
---------+--------+--------+
TOTAL         2452      895     3347
             73.26    26.74   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     139.738   DF=   1  PROB=0.0001
PHI                             -0.204
CONTINGENCY COEFFICIENT          0.200
CRAMER'S V                       0.204
LIKELIHOOD RATIO CHISQUARE     144.972   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE     138.808   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0000
                    (2-TAIL)                      PROB=0.0000
```

Analgesics

154

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1996  288
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3H0_PSY BY ABIOT125

S3H0_PSY     ABIOT125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1664 |    232 |   1896
         |   32.0 |  -32.0 |
         |  49.72 |   6.93 |  56.65
         |  87.76 |  12.24 |
         |  57.76 |  49.79 |
---------+--------+--------+
PRESENT  |   1217 |    234 |   1451
         |  -32.0 |   32.0 |
         |  36.36 |   6.99 |  43.35
         |  83.87 |  16.13 |
         |  42.24 |  50.21 |
---------+--------+--------+
TOTAL        2881      466     3347
            86.08    13.92   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        10.381    DF=    1   PROB=0.0013
PHI                                0.056
CONTINGENCY COEFFICIENT            0.056
CRAMER'S V                         0.056
LIKELIHOOD RATIO CHISQUARE        10.303    DF=    1   PROB=0.0013
CONTINUITY ADJ. CHI-SQUARE        10.068    DF=    1   PROB=0.0015
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0008
                    (2-TAIL)                           PROB=0.0015
```

Antibiotic

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1996  289
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3H0_PSY BY ACOAG125

S3H0_PSY     ACOAG125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1848 |     48 |   1896
         |   -5.5 |    5.5 |
         |  55.21 |   1.43 |  56.65
         |  97.47 |   2.53 |
         |  56.48 |  64.00 |
---------+--------+--------+
PRESENT  |   1424 |     27 |   1451
         |    5.5 |   -5.5 |
         |  42.55 |   0.81 |  43.35
         |  98.14 |   1.86 |
         |  43.52 |  36.00 |
---------+--------+--------+
TOTAL        3272       75     3347
            97.76     2.24   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         1.689    DF=    1   PROB=0.1938
PHI                               -0.022
CONTINGENCY COEFFICIENT            0.022
CRAMER'S V                         0.022
LIKELIHOOD RATIO CHISQUARE         1.717    DF=    1   PROB=0.1900
CONTINUITY ADJ. CHI-SQUARE         1.396    DF=    1   PROB=0.2373
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.1182
                    (2-TAIL)                           PROB=0.2384
```

Anticoagulant

155

```
SAS                                                                           14:02 TUESDAY, DECEMBER 24, 1985  270
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N6_PSY BY ACHVL125

S3N6_PSY     ACHVL125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1780 |    116 |   1896
         |   20.5 |  -20.5 |
         |  53.18 |   3.47 |  56.65
         |  93.88 |   6.12 |
         |  57.31 |  48.13 |
---------+--------+--------+
PRESENT  |   1326 |    125 |   1451
         |  -20.5 |   20.5 |
         |  39.62 |   3.73 |  43.35
         |  91.39 |   8.61 |
         |  42.69 |  51.87 |
---------+--------+--------+
TOTAL        3106      241     3347
            92.80     7.20   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         7.667   DF=   1  PROB=0.0056
PHI                                0.048
CONTINGENCY COEFFICIENT            0.048
CRAMER'S V                         0.048
LIKELIHOOD RATIO CHISQUARE         7.596   DF=   1  PROB=0.0059
CONTINUITY ADJ. CHI-SQUARE         7.288   DF=   1  PROB=0.0069
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0035
                    (2-TAIL)                        PROB=0.0069
```

```
SAS                                                                           14:02 TUESDAY, DECEMBER 24, 1985  271
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N6_PSY BY ADPRS125

S3N6_PSY     ADPRS125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1740 |    156 |   1896
         |  -29.7 |   29.7 |
         |  51.99 |   4.66 |  56.65
         |  91.77 |   8.23 |
         |  55.70 |  69.96 |
---------+--------+--------+
PRESENT  |   1384 |     67 |   1451
         |   29.7 |  -29.7 |
         |  41.35 |   2.00 |  43.35
         |  95.38 |   4.62 |
         |  44.30 |  30.04 |
---------+--------+--------+
TOTAL        3124      223     3347
            93.34     6.66   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        17.228   DF=   1  PROB=0.0001
PHI                               -0.072
CONTINGENCY COEFFICIENT            0.072
CRAMER'S V                         0.072
LIKELIHOOD RATIO CHISQUARE        17.846   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        16.583   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  272
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3MO_PSY BY AHYP125

S3MO_PSY     AHYP125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1592 |    304 |   1896
         |  -53.1 |   53.1 |
         |  47.56 |   9.08 |  56.65
         |  83.97 |  16.03 |
         |  54.82 |  68.62 |
---------+--------+--------+
PRESENT  |   1312 |    139 |   1451
         |   53.1 |  -53.1 |
         |  39.20 |   4.15 |  43.35
         |  90.42 |   9.58 |
         |  45.18 |  31.38 |
---------+--------+--------+
TOTAL        2904      443     3347
            86.76    13.24   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        29.815    DF=    1  PROB=0.0001
PHI                               -0.094
CONTINGENCY COEFFICIENT            0.094
CRAMER'S V                         0.094
LIKELIHOOD RATIO CHISQUARE        30.661    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        29.256    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0000
                    (2-TAIL)                            PROB=0.0000
```

Anti hypertensive

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  273
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3MO_PSY BY APLAS125

S3MO_PSY     APLAS125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1879 |     17 |   1896
         |   -4.0 |    4.0 |
         |  56.14 |   0.51 |  56.65
         |  99.10 |   0.90 |
         |  56.53 |  73.91 |
---------+--------+--------+
PRESENT  |   1445 |      6 |   1451
         |    4.0 |   -4.0 |
         |  43.17 |   0.18 |  43.35
         |  99.59 |   0.41 |
         |  43.47 |  26.09 |
---------+--------+--------+
TOTAL        3324       23     3347
            99.31     0.69   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         2.811    DF=    1  PROB=0.0938
PHI                               -0.029
CONTINGENCY COEFFICIENT            0.029
CRAMER'S V                         0.029
LIKELIHOOD RATIO CHISQUARE         2.969    DF=    1  PROB=0.0848
CONTINUITY ADJ. CHI-SQUARE         2.148    DF=    1  PROB=0.1428
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0690
                    (2-TAIL)                            PROB=0.1378
```

Anti neoplastic

```
SAS                                                              14:02 TUESDAY, DECEMBER 24, 1985  274
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY APARK125

S3NO_PSY     APARK125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1777 |    119 |   1896
         |    6.8 |   -6.8 |
         |  53.09 |   3.56 |  56.65
         |  93.72 |   6.28 |
         |  56.86 |  53.60 |
---------+--------+--------+
PRESENT  |   1348 |    103 |   1451
         |   -6.8 |    6.8 |
         |  40.27 |   3.08 |  43.35
         |  92.90 |   7.10 |
         |  43.14 |  46.40 |
---------+--------+--------+
TOTAL        3125      222     3347
            93.37     6.63   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        0.897   DF=   1  PROB=0.3435
PHI                               0.016
CONTINGENCY COEFFICIENT           0.016
CRAMER'S V                        0.016
LIKELIHOOD RATIO CHISQUARE        0.893   DF=   1  PROB=0.3446
CONTINUITY ADJ. CHI-SQUARE        0.769   DF=   1  PROB=0.3804
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.1901
                    (2-TAIL)                       PROB=0.3625
```

Antiparkinson

```
SAS                                                              14:02 TUESDAY, DECEMBER 24, 1985  275
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY ARHUM125

S3NO_PSY     ARHUM125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1738 |    158 |   1896
         |  -40.7 |   40.7 |
         |  51.93 |   4.72 |  56.65
         |  91.67 |   8.33 |
         |  55.35 |  76.33 |
---------+--------+--------+
PRESENT  |   1402 |     49 |   1451
         |   40.7 |  -40.7 |
         |  41.89 |   1.46 |  43.35
         |  96.62 |   3.38 |
         |  44.65 |  23.67 |
---------+--------+--------+
TOTAL        3140      207     3347
            93.82     6.18   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       34.801   DF=   1  PROB=0.0001
PHI                              -0.102
CONTINGENCY COEFFICIENT           0.101
CRAMER'S V                        0.102
LIKELIHOOD RATIO CHISQUARE       37.078   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       33.952   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0000
                    (2-TAIL)                       PROB=0.0000
```

Anti rheumatic

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  276
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY CARDC125

S3M0_PSY     CARDC125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1256 |    640 |   1896
         |  -53.1 |   53.1 |
         |  37.53 |  19.12 |  56.65
         |  66.24 |  33.76 |
         |  54.35 |  61.78 |
---------+--------+--------+
PRESENT  |   1055 |    396 |   1451
         |   53.1 |  -53.1 |
         |  31.52 |  11.83 |  43.35
         |  72.71 |  27.29 |
         |  45.65 |  38.22 |
---------+--------+--------+
TOTAL        2311     1036     3347
            69.05    30.95   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        16.058    DF=    1  PROB=0.0001
PHI                               -0.069
CONTINGENCY COEFFICIENT            0.069
CRAMER'S V                         0.069
LIKELIHOOD RATIO CHISQUARE        16.174    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        15.767    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0001
```

Cardiac Regulators

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  277
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY DIURT125

S3M0_PSY     DIURT125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1154 |    742 |   1896
         |  -87.7 |   87.7 |
         |  34.48 |  22.17 |  56.65
         |  60.86 |  39.14 |
         |  52.65 |  64.24 |
---------+--------+--------+
PRESENT  |   1038 |    413 |   1451
         |   87.7 |  -87.7 |
         |  31.01 |  12.34 |  43.35
         |  71.54 |  28.46 |
         |  47.35 |  35.76 |
---------+--------+--------+
TOTAL        2192     1155     3347
            65.49    34.51   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        41.421    DF=    1  PROB=0.0001
PHI                               -0.111
CONTINGENCY COEFFICIENT            0.111
CRAMER'S V                         0.111
LIKELIHOOD RATIO CHISQUARE        41.827    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        40.960    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Diuretics

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SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985  278
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM-GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY ELECT125

S3M0_PSY     ELECT125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1497 |    399 |   1896
         |  -36.5 |   36.5 |
         |  44.73 |  11.92 |  56.65
         |  78.96 |  21.04 |
         |  55.30 |  62.34 |
---------+--------+--------+
PRESENT  |   1210 |    241 |   1451
         |   36.5 |  -36.5 |
         |  36.15 |   7.20 |  43.35
         |  83.39 |  16.61 |
         |  44.70 |  37.66 |
---------+--------+--------+
TOTAL       2707      640     3347
           80.88    19.12   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         10.484   DF=    1  PROB=0.0012
PHI                                -0.056
CONTINGENCY COEFFICIENT             0.056
CRAMER'S V                          0.056
LIKELIHOOD RATIO CHISQUARE         10.557   DF=    1  PROB=0.0012
CONTINUITY ADJ. CHI-SQUARE         10.169   DF=    1  PROB=0.0014
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0007
                    (2-TAIL)                          PROB=0.0012
```

Electrolytes

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985  279
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY HYGLY125

S3M0_PSY     HYGLY125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1772 |    124 |   1896
         |  -16.4 |   16.4 |
         |  52.94 |   3.70 |  56.65
         |  93.46 |   6.54 |
         |  56.13 |  65.26 |
---------+--------+--------+
PRESENT  |   1385 |     66 |   1451
         |   16.4 |  -16.4 |
         |  41.38 |   1.97 |  43.35
         |  95.45 |   4.55 |
         |  43.87 |  34.74 |
---------+--------+--------+
TOTAL       3157      190     3347
           94.32     5.68   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          6.068   DF=    1  PROB=0.0138
PHI                                -0.043
CONTINGENCY COEFFICIENT             0.043
CRAMER'S V                          0.043
LIKELIHOOD RATIO CHISQUARE          6.210   DF=    1  PROB=0.0127
CONTINUITY ADJ. CHI-SQUARE          5.722   DF=    1  PROB=0.0168
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0080
                    (2-TAIL)                          PROB=0.0157
```

Hypoglycemics

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SAS                                                                       14:02 TUESDAY, DECEMBER 24, 1985  280
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY HYPNO125

S3NO_PSY     HYPNO125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1696 |    200 |   1896
         |  -44.8 |   44.8 |
         |  50.67 |   5.98 |  56.65
         |  89.45 |  10.55 |
         |  55.19 |  72.99 |
---------+--------+--------+
PRESENT  |   1377 |     74 |   1451
         |   44.8 |  -44.8 |
         |  41.14 |   2.21 |  43.35
         |  94.90 |   5.10 |
         |  44.81 |  27.01 |
---------+--------+--------+
TOTAL        3073      274     3347
            91.81     8.19   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           32.465   DF=   1  PROB=0.0001
PHI                                  -0.098
CONTINGENCY COEFFICIENT               0.098
CRAMER'S V                            0.098
LIKELIHOOD RATIO CHISQUARE           34.013   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE           31.744   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0000
                    (2-TAIL)                           PROB=0.0000
```

Hypnotics

```
SAS                                                                       14:02 TUESDAY, DECEMBER 24, 1985  281
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY INSUL125

S3NO_PSY     INSUL125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1785 |    111 |   1896
         |   -9.6 |    9.6 |
         |  53.33 |   3.32 |  56.65
         |  94.15 |   5.85 |
         |  56.34 |  62.01 |
---------+--------+--------+
PRESENT  |   1383 |     68 |   1451
         |    9.6 |   -9.6 |
         |  41.32 |   2.03 |  43.35
         |  95.31 |   4.69 |
         |  43.66 |  37.99 |
---------+--------+--------+
TOTAL        3168      179     3347
            94.65     5.35   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                            2.215   DF=   1  PROB=0.1367
PHI                                  -0.026
CONTINGENCY COEFFICIENT               0.026
CRAMER'S V                            0.026
LIKELIHOOD RATIO CHISQUARE            2.240   DF=   1  PROB=0.1345
CONTINUITY ADJ. CHI-SQUARE            1.990   DF=   1  PROB=0.1583
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0786
                    (2-TAIL)                           PROB=0.1414
```

Insulin

```
SAS                                                                 14:02 TUESDAY, DECEMBER 24, 1985 282
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3H0_PSY BY NARCO125

S3H0_PSY     NARCO125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1756 |    140 |   1896
         |  -38.0 |   38.0 |
         |  52.46 |   4.18 |  56.65
         |  92.62 |   7.38 |
         |  55.45 |  77.78 |
---------+--------+--------+
PRESENT  |   1411 |     40 |   1451
         |   38.0 |  -38.0 |
         |  42.16 |   1.20 |  43.35
         |  97.24 |   2.76 |
         |  44.55 |  22.22 |
---------+--------+--------+
TOTAL        3167      180     3347
            94.62     5.38   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          34.585   DF=   1  PROB=0.0001
PHI                                 -0.102
CONTINGENCY COEFFICIENT              0.101
CRAMER'S V                           0.102
LIKELIHOOD RATIO CHISQUARE          37.156   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          33.682   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Narcotics

```
SAS                                                                 14:02 TUESDAY, DECEMBER 24, 1985 283
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3H0_PSY BY PSYTR125

S3H0_PSY     PSYTR125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1624 |    272 |   1896
         |   26.5 |  -26.5 |
         |  48.52 |   8.13 |  56.65
         |  85.65 |  14.35 |
         |  57.59 |  51.61 |
---------+--------+--------+
PRESENT  |   1196 |    255 |   1451
         |  -26.5 |   26.5 |
         |  35.73 |   7.62 |  43.35
         |  82.43 |  17.57 |
         |  42.41 |  48.39 |
---------+--------+--------+
TOTAL        2820      527     3347
            84.25    15.75   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           6.456   DF=   1  PROB=0.0111
PHI                                  0.044
CONTINGENCY COEFFICIENT              0.044
CRAMER'S V                           0.044
LIKELIHOOD RATIO CHISQUARE           6.419   DF=   1  PROB=0.0113
CONTINUITY ADJ. CHI-SQUARE           6.215   DF=   1  PROB=0.0127
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0064
                    (2-TAIL)                          PROB=0.0127
```

Psychotropics

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985  284
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY RESPY125

S3N0_PSY     RESPY125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1798 |     98 |   1896
         |  -23.8 |   23.8 |
         |  53.72 |   2.93 |  56.65
         |  94.83 |   5.17 |
         |  55.91 |  74.81 |
---------+--------+--------+
PRESENT  |   1418 |     33 |   1451
         |   23.8 |  -23.8 |
         |  42.37 |   0.99 |  43.35
         |  97.73 |   2.27 |
         |  44.09 |  25.19 |
---------+--------+--------+
TOTAL        3216      131     3347
            96.09     3.91   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        18.311    DF=    1  PROB=0.0001
PHI                               -0.074
CONTINGENCY COEFFICIENT            0.074
CRAMER'S V                         0.074
LIKELIHOOD RATIO CHISQUARE        19.391    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        17.580    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Respiratory Dilators

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985  285
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY THYRD125

S3N0_PSY     THYRD125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1811 |     85 |   1896
         |   -5.7 |    5.7 |
         |  54.11 |   2.54 |  56.65
         |  95.52 |   4.48 |
         |  56.47 |  60.71 |
---------+--------+--------+
PRESENT  |   1396 |     55 |   1451
         |    5.7 |   -5.7 |
         |  41.71 |   1.64 |  43.35
         |  96.21 |   3.79 |
         |  43.53 |  39.29 |
---------+--------+--------+
TOTAL        3207      140     3347
            95.82     4.18   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         0.984    DF=    1  PROB=0.3212
PHI                               -0.017
CONTINGENCY COEFFICIENT            0.017
CRAMER'S V                         0.017
LIKELIHOOD RATIO CHISQUARE         0.992    DF=    1  PROB=0.3193
CONTINUITY ADJ. CHI-SQUARE         0.819    DF=    1  PROB=0.3656
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.1830
                    (2-TAIL)                          PROB=0.3388
```

Thyroid Preparation

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  286
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY TRANQ125

S3N0_PSY     TRANQ125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1667 |    229 |   1896
         |   31.0 |  -31.0 |
         |  49.81 |   6.84 |  56.65
         |  87.92 |  12.08 |
         |  57.72 |  49.89 |
---------+--------+--------+
PRESENT  |   1221 |    230 |   1451
         |  -31.0 |   31.0 |
         |  36.48 |   6.87 |  43.35
         |  84.15 |  15.85 |
         |  42.28 |  50.11 |
---------+--------+--------+
TOTAL        2888      459     3347
            86.29    13.71   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        9.889    DF=    1  PROB=0.0017
PHI                               0.054
CONTINGENCY COEFFICIENT           0.054
CRAMER'S V                        0.054
LIKELIHOOD RATIO CHISQUARE        9.815    DF=    1  PROB=0.0017
CONTINUITY ADJ. CHI-SQUARE        9.573    DF=    1  PROB=0.0020
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0010
                    (2-TAIL)                         PROB=0.0020
```

Tranquilizers

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  287
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY VASOD125

S3N0_PSY     VASOD125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1640 |    256 |   1896
         |  -32.8 |   32.8 |
         |  49.00 |   7.65 |  56.65
         |  86.50 |  13.50 |
         |  55.54 |  64.97 |
---------+--------+--------+
PRESENT  |   1313 |    138 |   1451
         |   32.8 |  -32.8 |
         |  39.23 |   4.12 |  43.35
         |  90.49 |   9.51 |
         |  44.46 |  35.03 |
---------+--------+--------+
TOTAL        2953      394     3347
            88.23    11.77   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       12.608    DF=    1  PROB=0.0004
PHI                              -0.061
CONTINGENCY COEFFICIENT           0.061
CRAMER'S V                        0.061
LIKELIHOOD RATIO CHISQUARE       12.833    DF=    1  PROB=0.0003
CONTINUITY ADJ. CHI-SQUARE       12.227    DF=    1  PROB=0.0005
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0002
                    (2-TAIL)                         PROB=0.0004
```

Vasodilators

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1985  288
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY OMEDS125

S3NO_PSY     OMEDS125

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |    637 |   1259 |   1896
         |   -6.5 |    6.5 |
         |  19.03 |  37.62 |  56.65
         |  33.60 |  66.40 |
         |  56.07 |  56.94 |
---------+--------+--------+
PRESENT  |    499 |    952 |   1451
         |    6.5 |   -6.5 |
         |  14.91 |  28.44 |  43.35
         |  34.39 |  65.61 |
         |  43.93 |  43.06 |
---------+--------+--------+
TOTAL        1136     2211     3347
            33.94    66.06   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          0.231   DF=   1  PROB=0.6311
PHI                                -0.008
CONTINGENCY COEFFICIENT             0.008
CRAMER'S V                          0.008
LIKELIHOOD RATIO CHISQUARE          0.230   DF=   1  PROB=0.6312
CONTINUITY ADJ. CHI-SQUARE          0.197   DF=   1  PROB=0.6575
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.3286
                    (2-TAIL)                         PROB=0.6323
```

Other Medications

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1985  289
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY SEIZRE28

S3NO_PSY     SEIZRE28

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |   .    |YES     |NO      |  TOTAL
---------+--------+--------+--------+
ABSENT   |      4 |      7 |   1885 |   1892
         |      . |   -7.7 |    7.7 |
         |      . |   0.21 |  56.39 |  56.60
         |      . |   0.37 |  99.63 |
         |      . |  26.92 |  56.83 |
---------+--------+--------+--------+
PRESENT  |      0 |     19 |   1432 |   1451
         |      . |    7.7 |   -7.7 |
         |      . |   0.57 |  42.84 |  43.40
         |      . |   1.31 |  98.69 |
         |      . |  73.08 |  43.17 |
---------+--------+--------+--------+
TOTAL           .       26     3317     3343
                .     0.78    99.22   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          9.392   DF=   1  PROB=0.0022
PHI                                -0.053
CONTINGENCY COEFFICIENT             0.053
CRAMER'S V                          0.053
LIKELIHOOD RATIO CHISQUARE          9.468   DF=   1  PROB=0.0021
CONTINUITY ADJ. CHI-SQUARE          8.214   DF=   1  PROB=0.0042
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0021
                    (2-TAIL)                         PROB=0.0025
```

Seizures

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  290
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY DIZZY28

S3NO_PSY     DIZZY28

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .     |YES     |NO      |  TOTAL
---------+-------------+--------+--------+
ABSENT   |           4 |     99 |   1793 |   1892
         |           . |   21.5 |  -21.5 |
         |           . |   2.96 |  53.63 |  56.60
         |           . |   5.23 |  94.77 |
         |           . |  72.26 |  55.93 |
---------+-------------+--------+--------+
PRESENT  |           0 |     38 |   1413 |   1451
         |           . |  -21.5 |   21.5 |
         |           . |   1.14 |  42.27 |  43.40
         |           . |   2.62 |  97.38 |
         |           . |  27.74 |  44.07 |
---------+-------------+--------+--------+
TOTAL                .      137     3206     3343
                     .     4.10    95.90   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       14.274   DF=   1  PROB=0.0002
PHI                               0.065
CONTINGENCY COEFFICIENT           0.065
CRAMER'S V                        0.065
LIKELIHOOD RATIO CHISQUARE       14.939   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       13.617   DF=   1  PROB=0.0002
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0001
                    (2-TAIL)                       PROB=0.0001
```

Dizziness

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  291
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY DCOLOR28

S3NO_PSY     DCOLOR28

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .     |YES     |NO      |  TOTAL
---------+-------------+--------+--------+
ABSENT   |           4 |     90 |   1802 |   1892
         |           . |  -23.2 |   23.2 |
         |           . |   2.69 |  53.90 |  56.60
         |           . |   4.76 |  95.24 |
         |           . |  45.00 |  57.33 |
---------+-------------+--------+--------+
PRESENT  |           0 |    110 |   1341 |   1451
         |           . |   23.2 |  -23.2 |
         |           . |   3.29 |  40.11 |  43.40
         |           . |   7.58 |  92.42 |
         |           . |  55.00 |  42.67 |
---------+-------------+--------+--------+
TOTAL                .      200     3143     3343
                     .     5.98    94.02   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       11.644   DF=   1  PROB=0.0006
PHI                              -0.059
CONTINGENCY COEFFICIENT           0.059
CRAMER'S V                        0.059
LIKELIHOOD RATIO CHISQUARE       11.520   DF=   1  PROB=0.0007
CONTINUITY ADJ. CHI-SQUARE       11.146   DF=   1  PROB=0.0008
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0004
                    (2-TAIL)                       PROB=0.0007
```

Discoloration

166

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  292
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY NUMBNS28

S3N0_PSY     NUMBNS28

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |        .|YES     |NO      |  TOTAL
---------+---------+--------+--------+
ABSENT   |        4|      42|    1850|   1892
         |        .|     9.2|    -9.2|
         |        .|    1.26|   55.34|  56.60
         |        .|    2.22|   97.78|
         |        .|   72.41|   56.32|
---------+---------+--------+--------+
PRESENT  |        0|      16|    1435|   1451
         |        .|    -9.2|     9.2|
         |        .|    0.48|   42.93|  43.40
         |        .|    1.10|   98.90|
         |        .|   27.59|   43.68|
---------+---------+--------+--------+
TOTAL             .       58     3285     3343
                  .     1.73    98.27   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                            6.012   DF=   1  PROB=0.0142
PHI                                   0.042
CONTINGENCY COEFFICIENT               0.042
CRAMER'S V                            0.042
LIKELIHOOD RATIO CHISQUARE            6.303   DF=   1  PROB=0.0121
CONTINUITY ADJ. CHI-SQUARE            5.374   DF=   1  PROB=0.0204
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0091
                    (2-TAIL)                           PROB=0.0157
```

Numbness

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  293
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY EDEMA28

S3N0_PSY     EDEMA28

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |        .|YES     |NO      |  TOTAL
---------+---------+--------+--------+
ABSENT   |        4|     286|    1606|   1892
         |        .|     1.9|    -1.9|
         |        .|    8.56|   48.04|  56.60
         |        .|   15.12|   84.88|
         |        .|   56.97|   56.53|
---------+---------+--------+--------+
PRESENT  |        0|     216|    1235|   1451
         |        .|    -1.9|     1.9|
         |        .|    6.46|   36.94|  43.40
         |        .|   14.89|   85.11|
         |        .|   43.03|   43.47|
---------+---------+--------+--------+
TOTAL             .      502     2841     3343
                  .    15.02    84.98   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                            0.034   DF=   1  PROB=0.8536
PHI                                   0.003
CONTINGENCY COEFFICIENT               0.003
CRAMER'S V                            0.003
LIKELIHOOD RATIO CHISQUARE            0.034   DF=   1  PROB=0.8536
CONTINUITY ADJ. CHI-SQUARE            0.018   DF=   1  PROB=0.8921
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.4466
                    (2-TAIL)                           PROB=0.8535
```

Edema

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985  294
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M6_PSY BY HIPRE26

S3M6_PSY     HIPRE26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .    |YES    |NO       |  TOTAL
---------+---------+-------+---------+
ABSENT   |       6 |   143 |   1747  |   1890
         |       . |  25.9 |  -25.9  |
         |       . |  4.28 |  52.29  |  56.57
         |       . |  7.57 |  92.43  |
         |       . | 69.08 |  55.74  |
---------+---------+-------+---------+
PRESENT  |       0 |    64 |   1387  |   1451
         |       . | -25.9 |   25.9  |
         |       . |  1.92 |  41.51  |  43.43
         |       . |  4.41 |  95.59  |
         |       . | 30.92 |  44.26  |
---------+---------+-------+---------+
TOTAL            .     207     3134      3341
                 .    6.20    93.80    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        14.082   DF=   1  PROB=0.0002
PHI                                0.065
CONTINGENCY COEFFICIENT            0.065
CRAMER'S V                         0.065
LIKELIHOOD RATIO CHISQUARE        14.522   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        13.524   DF=   1  PROB=0.0002
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0001
                    (2-TAIL)                        PROB=0.0002
```

High Blood Pressure

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1985  295
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M6_PSY BY WTLOSS26

S3M6_PSY     WTLOSS26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .    |YES    |NO       |  TOTAL
---------+---------+-------+---------+
ABSENT   |      76 |   208 |   1612  |   1820
         |       . | -40.1 |   40.1  |
         |       . |  6.43 |  49.83  |  56.26
         |       . | 11.43 |  88.57  |
         |       . | 47.17 |  57.70  |
---------+---------+-------+---------+
PRESENT  |      36 |   233 |   1182  |   1415
         |       . |  40.1 |  -40.1  |
         |       . |  7.20 |  36.54  |  43.74
         |       . | 16.47 |  83.53  |
         |       . | 52.83 |  42.30  |
---------+---------+-------+---------+
TOTAL            .     441     2794      3235
                 .   13.63    86.37    100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        17.160   DF=   1  PROB=0.0001
PHI                               -0.073
CONTINGENCY COEFFICIENT            0.073
CRAMER'S V                         0.073
LIKELIHOOD RATIO CHISQUARE        17.023   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        16.735   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Weight Loss

Severe Pain

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY PAIN26

S3M0_PSY     PAIN26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .     |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        4 |    208 |   1684 |   1892
         |        . |   58.0 |  -58.0 |
         |        . |   6.22 |  50.37 |  56.60
         |        . |  10.99 |  89.01 |
         |        . |  78.49 |  54.71 |
---------+----------+--------+--------+
PRESENT  |        0 |     57 |   1394 |   1451
         |        . |  -58.0 |   58.0 |
         |        . |   1.71 |  41.70 |  43.40
         |        . |   3.93 |  96.07 |
         |        . |  21.51 |  45.29 |
---------+----------+--------+--------+
TOTAL             .      265     3078     3343
                  .     7.93    92.07   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        58.158   DF=   1  PROB=0.0001
PHI                                0.130
CONTINGENCY COEFFICIENT            0.129
CRAMER'S V                         0.130
LIKELIHOOD RATIO CHISQUARE        60.453   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        56.202   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Dehydration

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY DEHYDR26

S3M0_PSY     DEHYDR26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .     |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        4 |     13 |   1879 |   1892
         |        . |  -12.5 |   12.5 |
         |        . |   0.39 |  56.21 |  56.60
         |        . |   0.69 |  99.31 |
         |        . |  28.89 |  56.97 |
---------+----------+--------+--------+
PRESENT  |        0 |     32 |   1419 |   1451
         |        . |   12.5 |  -12.5 |
         |        . |   0.96 |  42.45 |  43.40
         |        . |   2.21 |  97.79 |
         |        . |  71.11 |  43.03 |
---------+----------+--------+--------+
TOTAL             .       45     3298     3343
                  .     1.35    98.65   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        14.255   DF=   1  PROB=0.0002
PHI                               -0.065
CONTINGENCY COEFFICIENT            0.065
CRAMER'S V                         0.065
LIKELIHOOD RATIO CHISQUARE        14.304   DF=   1  PROB=0.0002
CONTINUITY ADJ. CHI-SQUARE        13.134   DF=   1  PROB=0.0003
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0001
                    (2-TAIL)                        PROB=0.0002
```

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1986  298
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY CNTRAC2S

S3M0_PSY     CNTRAC2S

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |   .      |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        4 |    272 |   1620 |   1892
         |        . | -153.6 |  153.6 |
         |        . |   8.14 |  48.46 |  56.60
         |        . |  14.38 |  85.62 |
         |        . |  36.17 |  62.52 |
---------+----------+--------+--------+
PRESENT  |        0 |    480 |    971 |   1451
         |        . |  153.6 | -153.6 |
         |        . |  14.36 |  29.05 |  43.40
         |        . |  33.08 |  66.92 |
         |        . |  63.83 |  37.48 |
---------+----------+--------+--------+
TOTAL             .      752     2591     3343
                  .    22.49    77.51   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       164.787    DF=    1  PROB=0.0001
PHI                               -0.222
CONTINGENCY COEFFICIENT            0.217
CRAMER'S V                         0.222
LIKELIHOOD RATIO CHISQUARE       164.251    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       163.716    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.0000
                    (2-TAIL)                          PROB=0.0000
```

Contractures

```
SAS                                                                  14:02 TUESDAY, DECEMBER 24, 1986  299
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY DYSPNA2S

S3M0_PSY     DYSPNA2S

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |   .      |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |       75 |     79 |   1741 |   1820
         |        . |   -7.1 |    7.1 |
         |        . |   2.44 |  53.82 |  56.26
         |        . |   4.34 |  95.66 |
         |        . |  51.63 |  56.49 |
---------+----------+--------+--------+
PRESENT  |       36 |     74 |   1341 |   1415
         |        . |    7.1 |   -7.1 |
         |        . |   2.29 |  41.45 |  43.74
         |        . |   5.23 |  94.77 |
         |        . |  48.37 |  43.51 |
---------+----------+--------+--------+
TOTAL             .      153     3082     3235
                  .     4.73    95.27   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         1.396    DF=    1  PROB=0.2373
PHI                               -0.021
CONTINGENCY COEFFICIENT            0.021
CRAMER'S V                         0.021
LIKELIHOOD RATIO CHISQUARE         1.388    DF=    1  PROB=0.2387
CONTINUITY ADJ. CHI-SQUARE         1.208    DF=    1  PROB=0.2721
FISHER'S EXACT TEST (1-TAIL)                          PROB=0.1382
                    (2-TAIL)                          PROB=0.2434
```

Dyspnea

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  300
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3MO_PSY BY BLEEDG26

S3MO_PSY     BLEEDG26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .    |YES      |NO       |  TOTAL
---------+------------+---------+---------+
ABSENT   |        78  |      49 |    1771 |   1820
         |         .  |    -2.2 |     2.2 |
         |         .  |    1.51 |   54.74 |  56.26
         |         .  |    2.69 |   97.31 |
         |         .  |   53.85 |   56.33 |
---------+------------+---------+---------+
PRESENT  |        38  |      42 |    1373 |   1416
         |         .  |     2.2 |    -2.2 |
         |         .  |    1.30 |   42.44 |  43.74
         |         .  |    2.97 |   97.03 |
         |         .  |   46.15 |   43.67 |
---------+------------+---------+---------+
TOTAL                .        91      3144     3236
                     .      2.81     97.19   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          0.222    DF=    1   PROB=0.6378
PHI                                -0.008
CONTINGENCY COEFFICIENT             0.008
CRAMER'S V                          0.008
LIKELIHOOD RATIO CHISQUARE          0.221    DF=    1   PROB=0.6384
CONTINUITY ADJ. CHI-SQUARE          0.132    DF=    1   PROB=0.7161
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.3558
                    (2-TAIL)                            PROB=0.6658
```

Bleeding

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  301
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3MO_PSY BY ULCER26

S3MO_PSY     ULCER26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .    |YES      |NO       |  TOTAL
---------+------------+---------+---------+
ABSENT   |        78  |      23 |    1797 |   1820
         |         .  |    -0.1 |     0.1 |
         |         .  |    0.71 |   55.55 |  56.26
         |         .  |    1.26 |   98.74 |
         |         .  |   56.10 |   56.26 |
---------+------------+---------+---------+
PRESENT  |        38  |      18 |    1397 |   1416
         |         .  |     0.1 |    -0.1 |
         |         .  |    0.56 |   43.18 |  43.74
         |         .  |    1.27 |   98.73 |
         |         .  |   43.90 |   43.74 |
---------+------------+---------+---------+
TOTAL                .        41      3194     3236
                     .      1.27     98.73   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          0.000    DF=    1   PROB=0.9832
PHI                                -0.000
CONTINGENCY COEFFICIENT             0.000
CRAMER'S V                          0.000
LIKELIHOOD RATIO CHISQUARE          0.000    DF=    1   PROB=0.9832
CONTINUITY ADJ. CHI-SQUARE          0.019    DF=    1   PROB=0.8907
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.5520
                    (2-TAIL)                            PROB=1.0000
```

Stasis Ulcer

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  302
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY FALLS26

S3NO_PSY     FALLS26

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |   .     |YES     |NO      |  TOTAL
---------+---------+--------+--------+
ABSENT   |     78  |     17 |   1801 |   1818
         |      .  |    0.7 |   -0.7 |
         |      .  |   0.53 |  55.71 |  56.23
         |      .  |   0.94 |  99.06 |
         |      .  |  58.62 |  56.21 |
---------+---------+--------+--------+
PRESENT  |     36  |     12 |   1403 |   1415
         |      .  |   -0.7 |    0.7 |
         |      .  |   0.37 |  43.40 |  43.77
         |      .  |   0.85 |  99.15 |
         |      .  |  41.38 |  43.79 |
---------+---------+--------+--------+
TOTAL           .       29     3204     3233
                .     0.90    99.10   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        0.068    DF=   1  PROB=0.7946
PHI                               0.005
CONTINGENCY COEFFICIENT           0.005
CRAMER'S V                        0.005
LIKELIHOOD RATIO CHISQUARE        0.068    DF=   1  PROB=0.7941
CONTINUITY ADJ. CHI-SQUARE        0.005    DF=   1  PROB=0.9423
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.4743
                    (2-TAIL)                        PROB=0.8627
```

Frequent Falls

```
SAS                                                                        14:02 TUESDAY, DECEMBER 24, 1985  303
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY MED_PBLM

S3NO_PSY     MED_PBLM

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |        |        |        |        |4 OR MOR|
         |0       |1       |2       |3       |E       |  TOTAL
---------+--------+--------+--------+--------+--------+
ABSENT   |    850 |    578 |    285 |    122 |     61 |   1896
         |   77.3 |    0.8 |  -33.9 |  -26.4 |  -17.7 |
         |  25.40 |  17.27 |   8.52 |   3.65 |   1.82 |  56.65
         |  44.83 |  30.49 |  15.03 |   6.43 |   3.22 |
         |  62.32 |  56.72 |  50.62 |  46.56 |  43.88 |
---------+--------+--------+--------+--------+--------+
PRESENT  |    514 |    441 |    278 |    140 |     78 |   1451
         |  -77.3 |   -0.8 |   33.9 |   26.4 |   17.7 |
         |  15.36 |  13.18 |   8.31 |   4.18 |   2.33 |  43.35
         |  35.42 |  30.39 |  19.16 |   9.65 |   5.38 |
         |  37.68 |  43.28 |  49.38 |  53.44 |  56.12 |
---------+--------+--------+--------+--------+--------+
TOTAL        1364     1019      563      262      139     3347
            40.75    30.45    16.82     7.83     4.15   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       46.243    DF=   4  PROB=0.0001
PHI                               0.118
CONTINGENCY COEFFICIENT           0.117
CRAMER'S V                        0.118
LIKELIHOOD RATIO CHISQUARE       46.170    DF=   4  PROB=0.0001
```

Number of Medical Problems

```
SAS                                                                            14:02 TUESDAY, DECEMBER 24, 1985  304
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY MOBILE27

S3N0_PSY     MOBILE27

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|       8|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |     627|     281|     107|     121|     411|     243|     100|       6|   1896
         |   214.6|    77.1|     5.0|   -39.3|    98.9|  -168.3|  -174.7|   -13.3|
         |   18.73|    8.40|    3.20|  . 3.62|   12.28|    7.26|    2.99|    0.18|  56.65
         |   33.07|   14.82|    5.64|    6.38|   21.68|   12.82|    5.27|    0.32|
         |   86.13|   78.06|   59.44|   42.76|   74.59|   33.47|   20.62|   17.65|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |     101|      79|      73|     162|     140|     483|     385|      28|   1451
         |  -214.6|   -77.1|    -5.0|    39.3|   -98.9|   168.3|   174.7|    13.3|
         |    3.02|    2.36|    2.18|    4.84|    4.18|   14.43|   11.50|    0.84|  43.35
         |    6.96|    5.44|    5.03|   11.16|    9.65|   33.29|   26.53|    1.93|
         |   13.87|   21.94|   40.56|   57.24|   25.41|   66.53|   79.38|   82.35|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL         728      360      180      283      551      726      485       34     3347
            21.75    10.76     5.38     8.46    16.46    21.69    14.49     1.02   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                   856.069   DF=   7  PROB=0.0001
PHI                            0.506
CONTINGENCY COEFFICIENT        0.451
CRAMER'S V                     0.506
LIKELIHOOD RATIO CHISQUARE   910.543   DF=   7  PROB=0.0001
```

Mobility

```
SAS                                                                            14:02 TUESDAY, DECEMBER 24, 1985  305
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY TRNSFR28

S3N0_PSY     TRNSFR28

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |       0|     854|     261|     146|     335|     296|       4|   1896
         |       .|   294.2|    61.0|    10.6|   -94.5|  -259.9|   -11.3|
         |       .|   25.52|    7.80|    4.36|   10.01|    8.85|    0.12|  56.66
         |       .|   45.04|   13.77|    7.70|   17.67|   15.61|    0.21|
         |       .|   86.44|   73.94|   61.09|   44.20|   30.17|   14.81|
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |       1|     134|      92|      93|     423|     685|      23|   1450
         |       .|  -294.2|   -61.0|   -10.6|    94.5|   259.9|    11.3|
         |       .|    4.00|    2.75|    2.78|   12.64|   20.47|    0.69|  43.34
         |       .|    9.24|    6.34|    6.41|   29.17|   47.24|    1.59|
         |       .|   13.56|   26.06|   38.91|   55.80|   69.83|   85.19|
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           .      988      353      239      758      981       27     3346
                .    29.53    10.55     7.14    22.65    29.32     0.81   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                   749.057   DF=   5  PROB=0.0001
PHI                            0.473
CONTINGENCY COEFFICIENT        0.428
CRAMER'S V                     0.473
LIKELIHOOD RATIO CHISQUARE   806.432   DF=   5  PROB=0.0001
```

Transfer

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1985  306
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY EATING29

S3M0_PSY     EATING29

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|  TOTAL
---------+--------+--------+--------+--------+--------+
ABSENT   |     705|     949|     132|     100|      10|   1896
         |   282.4|   158.8|  -143.9|  -255.7|   -41.5|
         |   21.06|   28.35|    3.94|    2.99|    0.30|  56.65
         |   37.18|   50.05|    6.96|    5.27|    0.53|
         |   94.50|   68.03|   27.10|   15.92|   10.99|
---------+--------+--------+--------+--------+--------+
PRESENT  |      41|     446|     355|     528|      81|   1451
         |  -282.4|  -158.8|   143.9|   255.7|    41.5|
         |    1.22|   13.33|   10.61|   15.78|    2.42|  43.35
         |    2.83|   30.74|   24.47|   36.39|    5.58|
         |    5.50|   31.97|   72.90|   84.08|   89.01|
---------+--------+--------+--------+--------+--------+
TOTAL          746     1395      487      628       91     3347
             22.29    41.68    14.55    18.76     2.72   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    1183.338    DF=    4  PROB=0.0001
PHI                              0.595
CONTINGENCY COEFFICIENT          0.511
CRAMER'S V                       0.595
LIKELIHOOD RATIO CHISQUARE    1331.866    DF=    4  PROB=0.0001
```

Eating

```
SAS                                                                              14:02 TUESDAY, DECEMBER 24, 1985  307
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY DRESSG30

S3M0_PSY     DRESSG30

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |     433|     518|     176|     318|     425|      26|   1896
         |   182.1|   202.5|    48.0|    62.5|  -445.7|   -49.3|
         |   12.94|   15.48|    5.26|    9.50|   12.70|    0.78|  56.65
         |   22.84|   27.32|    9.28|   16.77|   22.42|    1.37|
         |   97.74|   93.00|   77.88|   70.51|   27.65|   19.55|
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |      10|      39|      50|     133|    1112|     107|   1451
         |  -182.1|  -202.5|   -48.0|   -62.5|   445.7|    49.3|
         |    0.30|    1.17|    1.49|    3.97|   33.22|    3.20|  43.35
         |    0.69|    2.69|    3.45|    9.17|   76.64|    7.37|
         |    2.26|    7.00|   22.12|   29.49|   72.35|   80.45|
---------+--------+--------+--------+--------+--------+--------+
TOTAL          443      557      226      451     1537      133     3347
             13.24    16.64     6.75    13.47    45.92     3.97   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    1281.887    DF=    5  PROB=0.0001
PHI                              0.619
CONTINGENCY COEFFICIENT          0.526
CRAMER'S V                       0.619
LIKELIHOOD RATIO CHISQUARE    1472.525    DF=    5  PROB=0.0001
```

Dressing

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  308
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY BATHS31

S3NO_PSY     BATHS31

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       . |       1 |       2 |       3 |       4 |       5 |  TOTAL
---------+---------+---------+---------+---------+---------+---------+
ABSENT   |       1 |      75 |     557 |     210 |     472 |     581 |   1896
         |       . |    32.5 |   228.5 |    68.4 |   128.2 |  -457.7 |
         |       . |    2.24 |   16.65 |    6.28 |   14.11 |   17.36 |  56.63
         |       . |    3.96 |   29.39 |   11.08 |   24.91 |   30.66 |
         |       . |  100.00 |   96.03 |   84.00 |   77.76 |   31.68 |
---------+---------+---------+---------+---------+---------+---------+
PRESENT  |       0 |       0 |      23 |      40 |     135 |    1253 |   1451
         |       . |   -32.5 |  -228.5 |   -68.4 |  -128.2 |   457.7 |
         |       . |    0.00 |    0.69 |    1.20 |    4.03 |   37.45 |  43.37
         |       . |    0.00 |    1.59 |    2.76 |    9.30 |   86.35 |
         |       . |    0.00 |    3.97 |   16.00 |   22.24 |   68.32 |
---------+---------+---------+---------+---------+---------+---------+
TOTAL            .        75       580       250       607      1834     3346
                 .      2.24     17.33      7.47     18.14     54.81   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                  1076.599   DF=   4  PROB=0.0001
PHI                            0.567
CONTINGENCY COEFFICIENT        0.493
CRAMER'S V                     0.567
LIKELIHOOD RATIO CHISQUARE  1232.325   DF=   4  PROB=0.0001
```

Bathing

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  309
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY TOILET32

S3NO_PSY     TOILET32

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |     858|     290|      43|     267|     137|     181|     120|   1896
         |   338.0|    87.2|     5.0|    44.4|   -64.1|  -197.4|  -213.1|
         |   25.63|    8.66|    1.28|    7.98|    4.09|    5.41|    3.59|  56.65
         |   45.25|   15.30|    2.27|   14.08|    7.23|    9.55|    6.33|
         |   93.46|   81.01|   64.18|   67.94|   38.59|   27.10|   20.41|
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      60|      68|      24|     126|     218|     487|     468|   1451
         |  -338.0|   -87.2|    -5.0|   -44.4|    64.1|   197.4|   213.1|
         |    1.79|    2.03|    0.72|    3.76|    6.51|   14.55|   13.98|  43.35
         |    4.14|    4.69|    1.65|    8.68|   15.02|   33.56|   32.25|
         |    6.54|   18.99|   35.82|   32.06|   61.41|   72.90|   79.59|
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL          918      358       67      393      355      668      588     3347
             27.43    10.70     2.00    11.74    10.61    19.96    17.57   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                  1214.241   DF=   6  PROB=0.0001
PHI                            0.602
CONTINGENCY COEFFICIENT        0.516
CRAMER'S V                     0.602
LIKELIHOOD RATIO CHISQUARE  1359.518   DF=   6  PROB=0.0001
```

Tioleting

```
SAS                                                                             14:02 TUESDAY, DECEMBER 24, 1985  310
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY BLADDR33

S3N0_PSY     BLADDR33

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |    1178 |    228 |    364 |      3 |     90 |     33 |   1896
         |   429.7 |   30.9 | -416.0 |   -1.5 |  -42.0 |   -1.0 |
         |   35.20 |   6.81 |  10.88 |   0.09 |   2.69 |   0.99 |  56.65
         |   62.13 |  12.03 |  19.20 |   0.16 |   4.75 |   1.74 |
         |   89.17 |  65.52 |  26.43 |  37.50 |  38.63 |  55.00 |
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |     143 |    120 |   1013 |      5 |    143 |     27 |   1451
         |  -429.7 |  -30.9 |  416.0 |    1.5 |   42.0 |    1.0 |
         |    4.27 |   3.59 |  30.27 |   0.15 |   4.27 |   0.81 |  43.35
         |    9.86 |   8.27 |  69.81 |   0.34 |   9.86 |   1.86 |
         |   10.83 |  34.48 |  73.57 |  62.50 |  61.37 |  45.00 |
---------+--------+--------+--------+--------+--------+--------+
TOTAL        1321      348     1377        8      233       60     3347
            39.47    10.40    41.14     0.24     6.96     1.79   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                   1124.183   DF=   5  PROB=0.0001
PHI                             0.580
CONTINGENCY COEFFICIENT         0.501
CRAMER'S V                      0.580
LIKELIHOOD RATIO CHISQUARE   1231.860   DF=   5  PROB=0.0001
```

Bladder Control

```
SAS                                                                             14:02 TUESDAY, DECEMBER 24, 1985  311
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY BOWEL34

S3N0_PSY     BOWEL34

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1 |       2 |       3 |       4 |       5 |  TOTAL
---------+---------+---------+---------+---------+---------+
ABSENT   |    1371 |     194 |     307 |       5 |      19 |   1896
         |   485.0 |   -29.8 |  -459.4 |     2.2 |     2.0 |
         |   40.96 |    5.80 |    9.17 |    0.15 |    0.57 |  56.65
         |   72.31 |   10.23 |   16.19 |    0.26 |    1.00 |
         |   87.66 |   49.11 |   22.69 |  100.00 |   63.33 |
---------+---------+---------+---------+---------+---------+
PRESENT  |     193 |     201 |    1046 |       0 |      11 |   1451
         |  -485.0 |    29.8 |   459.4 |    -2.2 |    -2.0 |
         |    5.77 |    6.01 |   31.25 |    0.00 |    0.33 |  43.35
         |   13.30 |   13.85 |   72.09 |    0.00 |    0.76 |
         |   12.34 |   50.89 |   77.31 |    0.00 |   36.67 |
---------+---------+---------+---------+---------+---------+
TOTAL        1564       395      1353         5        30     3347
            46.73     11.80     40.42      0.15      0.90   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                   1261.291   DF=   4  PROB=0.0001
PHI                             0.614
CONTINGENCY COEFFICIENT         0.523
CRAMER'S V                      0.614
LIKELIHOOD RATIO CHISQUARE   1375.842   DF=   4  PROB=0.0001
```

Bowel Control

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  312
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY HYGIEN36

S3NO_PSY     HYGIEN36

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       0|       1|       2|       3|       4|       5|       7|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      0 |    405 |    614 |    167 |    333 |    377 |      0 |   1896
         |   -0.6 |  172.2 |  248.1 |   40.7 |   61.7 | -521.4 |   -0.6 |
         |   0.00 |  12.10 |  18.34 |   4.99 |   9.95 |  11.26 |   0.00 |  56.65
         |   0.00 |  21.36 |  32.38 |   8.81 |  17.56 |  19.88 |   0.00 |
         |   0.00 |  98.54 |  95.05 |  74.89 |  69.52 |  23.77 |   0.00 |
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      1 |      6 |     32 |     56 |    146 |   1209 |      1 |   1451
         |    0.6 | -172.2 | -248.1 |  -40.7 |  -61.7 |  521.4 |    0.6 |
         |   0.03 |   0.18 |   0.96 |   1.67 |   4.36 |  36.12 |   0.03 |  43.35
         |   0.07 |   0.41 |   2.21 |   3.86 |  10.06 |  83.32 |   0.07 |
         | 100.00 |   1.46 |   4.95 |  25.11 |  30.48 |  76.23 | 100.00 |
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           1      411      646      223      479     1586        1     3347
             0.03    12.28    19.30     6.66    14.31    47.39     0.03   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                    1444.780   DF=   6  PROB=0.0001
PHI                              0.657
CONTINGENCY COEFFICIENT          0.549
CRAMER'S V                       0.657
LIKELIHOOD RATIO CHISQUARE    1683.250   DF=   6  PROB=0.0001
```

Personal Hygiene

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  313
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY LEARN36

S3NO_PSY     LEARN36

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      0 |      1 |      2 |      3 |      4 |      5 |      6 |  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      1 |   1033 |    647 |    150 |     19 |     46 |      0 |   1896
         |    0.4 |  445.0 |  128.7 | -214.8 | -300.5 |  -58.2 |   -0.6 |
         |   0.03 |  30.86 |  19.33 |   4.48 |   0.57 |   1.37 |   0.00 |  56.65
         |   0.05 |  54.48 |  34.12 |   7.91 |   1.00 |   2.43 |   0.00 |
         | 100.00 |  99.52 |  70.71 |  23.29 |   3.37 |  25.00 |   0.00 |
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      0 |      5 |    268 |    494 |    545 |    138 |      1 |   1451
         |   -0.4 | -445.0 | -128.7 |  214.8 |  300.5 |   58.2 |    0.6 |
         |   0.00 |   0.15 |   8.01 |  14.76 |  16.28 |   4.12 |   0.03 |  43.35
         |   0.00 |   0.34 |  18.47 |  34.05 |  37.56 |   9.51 |   0.07 |
         |   0.00 |   0.48 |  29.29 |  76.71 |  96.63 |  75.00 | 100.00 |
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           1     1038      915      644      564      184        1     3347
             0.03    31.01    27.34    19.24    16.85     5.50     0.03   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                    1871.307   DF=   6  PROB=0.0001
PHI                              0.748
CONTINGENCY COEFFICIENT          0.599
CRAMER'S V                       0.748
LIKELIHOOD RATIO CHISQUARE    2338.373   DF=   6  PROB=0.0001
```

Learning Ability

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  314
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY MOTIVE37

S3M0_PSY     MOTIVE37

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |       2|     437|     702|     351|     260|      92|      52|   1894
         |       .|   189.6|   295.5|     7.3|    23.3|  -516.7|     1.0|
         |       .|   13.06|   20.99|   10.49|    7.77|    2.75|    1.55|  56.62
         |       .|   23.07|   37.06|   18.53|   13.73|    4.86|    2.75|
         |       .|  100.00|   97.77|   57.83|   62.20|    8.56|   57.78|
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |       0|       0|      16|     256|     158|     983|      38|   1451
         |       .|  -189.6|  -295.5|    -7.3|   -23.3|   516.7|    -1.0|
         |       .|    0.00|    0.48|    7.65|    4.72|   29.39|    1.14|  43.38
         |       .|    0.00|    1.10|   17.64|   10.89|   67.75|    2.62|
         |       .|    0.00|    2.23|   42.17|   37.80|   91.44|   42.22|
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL            .      437      718      607      418     1075       90     3345
                 .    13.06    21.46    18.15    12.50    32.14     2.69   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                  1846.575    DF=    5  PROB=0.0001
PHI                            0.743
CONTINGENCY COEFFICIENT        0.596
CRAMER'S V                     0.743
LIKELIHOOD RATIO CHISQUARE  2293.272    DF=    5  PROB=0.0001
```

Motvation

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  315
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY WANDER38

S3M0_PSY     WANDER38

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |    1794|      70|      16|       7|       8|       1|   1896
         |    79.8|   -51.2|    -4.4|   -18.5|    -4.5|    -1.3|
         |   53.60|    2.09|    0.48|    0.21|    0.24|    0.03|  56.65
         |   94.62|    3.69|    0.84|    0.37|    0.42|    0.05|
         |   59.29|   32.71|   44.44|   15.56|   36.36|   25.00|
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |    1232|     144|      20|      38|      14|       3|   1451
         |   -79.8|    51.2|     4.4|    18.5|     4.5|     1.3|
         |   36.81|    4.30|    0.60|    1.14|    0.42|    0.09|  43.35
         |   84.91|    9.92|    1.38|    2.62|    0.96|    0.21|
         |   40.71|   67.29|   55.56|   84.44|   63.64|   75.00|
---------+--------+--------+--------+--------+--------+--------+
TOTAL        3026      214       36       45       22        4     3347
            90.41     6.39     1.08     1.34     0.66     0.12   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    96.951    DF=    5  PROB=0.0001
PHI                            0.170
CONTINGENCY COEFFICIENT        0.168
CRAMER'S V                     0.170
LIKELIHOOD RATIO CHISQUARE    98.402    DF=    5  PROB=0.0001
```

Wandering

```
SAS                                                                               14:02 TUESDAY, DECEMBER 24, 1985  316
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY VABUSE39

S3M0_PSY     --VABUSE39

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|       8|       9|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |   1346 |    217 |    119 |     54 |     48 |     51 |     50 |     10 |      1 |   1896
         |  114.5 |   18.2 |  -51.5 |  -14.5 |  -27.9 |  -51.5 |   12.6 |   -0.2 |    0.4 |
         |  40.22 |   6.48 |   3.56 |   1.61 |   1.43 |   1.52 |   1.49 |   0.30 |   0.03 |  56.65
         |  70.99 |  11.45 |   6.28 |   2.85 |   2.53 |   2.69 |   2.64 |   0.53 |   0.05 |
         |  61.91 |  61.82 |  39.53 |  44.63 |  35.82 |  28.18 |  75.76 |  55.56 | 100.00 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |    828 |    134 |    182 |     67 |     86 |    130 |     16 |      8 |      0 |   1451
         | -114.5 |  -18.2 |   51.5 |   14.5 |   27.9 |   51.5 |  -12.6 |    0.2 |   -0.4 |
         |  24.74 |   4.00 |   5.44 |   2.00 |   2.57 |   3.88 |   0.48 |   0.24 |   0.00 |  43.35
         |  57.06 |   9.24 |  12.54 |   4.62 |   5.93 |   8.96 |   1.10 |   0.55 |   0.00 |
         |  38.09 |  38.18 |  60.47 |  55.37 |  64.18 |  71.82 |  24.24 |  44.44 |   0.00 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL        2174      351      301      121      134      181       66       18        1     3347
            64.95    10.49     8.99     3.62     4.00     5.41     1.97     0.54     0.03   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     166.386    DF=   8  PROB=0.0001
PHI                              0.222
CONTINGENCY COEFFICIENT          0.217
CRAMER'S V                       0.222
LIKELIHOOD RATIO CHISQUARE     166.306    DF=   8  PROB=0.0001
```

Verbal Abuse

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SAS                                                                               14:02 TUESDAY, DECEMBER 24, 1985  317
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY AGRESS40

S3M0_PSY       AGRESS40

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       1|       2|       3|       4|       5|       6|       7|       8|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |   1618 |     92 |     66 |     16 |     25 |      9 |     66 |      4 |   1896
         |  169.5 |  -34.3 | -108.5 |   -4.4 |  -21.5 |  -16.5 |   17.3 |   -1.7 |
         |  48.34 |   2.75 |   1.97 |   0.48 |   0.75 |   0.27 |   1.97 |   0.12 |  56.65
         |  85.34 |   4.85 |   3.48 |   0.84 |   1.32 |   0.47 |   3.48 |   0.21 |
         |  63.28 |  41.26 |  21.43 |  44.44 |  30.49 |  20.00 |  76.74 |  40.00 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |    939 |    131 |    242 |     20 |     57 |     36 |     20 |      6 |   1451
         | -169.5 |   34.3 |  108.5 |    4.4 |   21.5 |   16.5 |  -17.3 |    1.7 |
         |  28.05 |   3.91 |   7.23 |   0.60 |   1.70 |   1.08 |   0.60 |   0.18 |  43.35
         |  64.71 |   9.03 |  16.68 |   1.38 |   3.93 |   2.48 |   1.38 |   0.41 |
         |  36.72 |  58.74 |  78.57 |  55.56 |  69.51 |  80.00 |  23.26 |  60.00 |
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL        2557      223      308       36       82       45       86       10     3347
            76.40     6.66     9.20     1.08     2.45     1.34     2.57     0.30   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     287.758    DF=   7  PROB=0.0001
PHI                              0.293
CONTINGENCY COEFFICIENT          0.281
CRAMER'S V                       0.293
LIKELIHOOD RATIO CHISQUARE     293.878    DF=   7  PROB=0.0001
```

Aggression

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SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985  318
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3H0_PSY BY SFCARE41

S3H0_PSY      SFCARE41

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       0|       1|       2|       3|       4|       5|  TOTAL
---------+--------+--------+--------+--------+--------+--------+
ABSENT   |       0|    1253|     306|      74|     186|      77|   1896
         |    -0.6|   490.0|    94.1|    -3.0|    34.2|  -614.7|
         |    0.00|   37.44|    9.14|    2.21|    5.56|    2.30|  56.65
         |    0.00|   66.09|   16.14|    3.90|    9.81|    4.06|
         |    0.00|   93.02|   81.82|   54.41|   69.40|    6.31|
---------+--------+--------+--------+--------+--------+--------+
PRESENT  |       1|      94|      68|      62|      82|    1144|   1451
         |     0.6|  -490.0|   -94.1|     3.0|   -34.2|   614.7|
         |    0.03|    2.81|    2.03|    1.85|    2.45|   34.18|  43.35
         |    0.07|    6.48|    4.69|    4.27|    5.65|   78.84|
         |  100.00|    6.98|   18.18|   45.59|   30.60|   93.69|
---------+--------+--------+--------+--------+--------+--------+
TOTAL           1     1347      374      136      268     1221     3347
             0.03    40.24    11.17     4.06     8.01    36.48   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                  2101.518   DF=   5  PROB=0.0001
PHI                            0.792
CONTINGENCY COEFFICIENT        0.621
CRAMER'S V                     0.792
LIKELIHOOD RATIO CHISQUARE  2461.927   DF=   5  PROB=0.0001
```

Refused to Care For One Self

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SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985  319
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3H0_PSY BY REGRES42

S3H0_PSY      REGRES42

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |       0|    1498|     228|      70|      53|      44|       3|   1896
         |       .|   259.3|  -101.2|   -37.1|   -82.4|   -86.9|    -2.7|
         |       .|   44.77|    6.81|    2.09|    1.58|    1.32|    0.09|  56.66
         |       .|   79.01|   12.03|    3.69|    2.80|    2.32|    0.16|
         |       .|   68.53|   39.24|   37.04|   28.49|   22.68|   30.00|
---------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |       1|     688|     353|     119|     133|     150|       7|   1450
         |       .|  -259.3|   101.2|    37.1|    82.4|    86.9|     2.7|
         |       .|   20.56|   10.55|    3.56|    3.97|    4.48|    0.21|  43.34
         |       .|   47.45|   24.34|    8.21|    9.17|   10.34|    0.48|
         |       .|   31.47|   60.76|   62.96|   71.51|   77.32|   70.00|
---------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           .     2186      581      189      186      194       10     3346
                .    65.33    17.36     5.65     5.56     5.80     0.30   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                   380.980   DF=   5  PROB=0.0001
PHI                            0.337
CONTINGENCY COEFFICIENT        0.320
CRAMER'S V                     0.337
LIKELIHOOD RATIO CHISQUARE   386.156   DF=   5  PROB=0.0001
```

Regressive Behavior

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  320
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3MO_PSY BY DEPRES43

S3MO_PSY     DEPRES43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .     |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        1 |    155 |   1740 |   1895
         |        . |   15.7 |  -15.7 |
         |        . |   4.63 |  52.00 |  56.63
         |        . |   8.18 |  91.82 |
         |        . |  63.01 |  56.13 |
---------+----------+--------+--------+
PRESENT  |        0 |     91 |   1360 |   1451
         |        . |  -15.7 |   15.7 |
         |        . |   2.72 |  40.65 |  43.37
         |        . |   6.27 |  93.73 |
         |        . |  36.99 |  43.87 |
---------+----------+--------+--------+
TOTAL             .      246     3100     3346
                  .     7.35    92.65   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         4.391   DF=   1  PROB=0.0361
PHI                                0.036
CONTINGENCY COEFFICIENT            0.036
CRAMER'S V                         0.036
LIKELIHOOD RATIO CHISQUARE         4.460   DF=   1  PROB=0.0349
CONTINUITY ADJ. CHI-SQUARE         4.116   DF=   1  PROB=0.0425
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0207
                    (2-TAIL)                        PROB=0.0383
```

Depression

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  321
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3MO_PSY BY HALLUC43

S3MO_PSY     HALLUC43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .     |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        1 |     83 |   1812 |   1895
         |        . |  -34.2 |   34.2 |
         |        . |   2.48 |  54.15 |  56.63
         |        . |   4.38 |  95.62 |
         |        . |  40.10 |  57.73 |
---------+----------+--------+--------+
PRESENT  |        0 |    124 |   1327 |   1451
         |        . |   34.2 |  -34.2 |
         |        . |   3.71 |  39.66 |  43.37
         |        . |   8.55 |  91.45 |
         |        . |  59.90 |  42.27 |
---------+----------+--------+--------+
TOTAL             .      207     3139     3346
                  .     6.19    93.81   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        24.573   DF=   1  PROB=0.0001
PHI                               -0.086
CONTINGENCY COEFFICIENT            0.085
CRAMER'S V                         0.086
LIKELIHOOD RATIO CHISQUARE        24.321   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        23.880   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Hallucinations

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  322
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY PARANO43

S3NO_PSY     PARANO43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .     |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        1 |    145 |   1750 |   1895
         |        . |    0.0 |   -0.0 |
         |        . |   4.33 |  52.30 |  56.63
         |        . |   7.65 |  92.35 |
         |        . |  56.64 |  56.63 |
---------+----------+--------+--------+
PRESENT  |        0 |    111 |   1340 |   1451
         |        . |   -0.0 |    0.0 |
         |        . |   3.32 |  40.05 |  43.37
         |        . |   7.65 |  92.35 |
         |        . |  43.36 |  43.37 |
---------+----------+--------+--------+
TOTAL             .      256     3090     3346
                  .     7.65    92.35   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        0.000   DF=   1  PROB=0.9984
PHI                               0.000
CONTINGENCY COEFFICIENT           0.000
CRAMER'S V                        0.000
LIKELIHOOD RATIO CHISQUARE        0.000   DF=   1  PROB=0.9984
CONTINUITY ADJ. CHI-SQUARE        0.004   DF=   1  PROB=0.9492
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.5260
                    (2-TAIL)                       PROB=1.0000
```

Paranoia

```
SAS                                                                   14:02 TUESDAY, DECEMBER 24, 1985  323
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY WDRAWN43

S3NO_PSY     WDRAWN43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .     |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        1 |    472 |   1423 |   1895
         |        . | -136.3 |  136.3 |
         |        . |  14.11 |  42.53 |  56.63
         |        . |  24.91 |  75.09 |
         |        . |  43.95 |  62.63 |
---------+----------+--------+--------+
PRESENT  |        0 |    602 |    849 |   1451
         |        . |  136.3 | -136.3 |
         |        . |  17.99 |  25.37 |  43.37
         |        . |  41.49 |  58.51 |
         |        . |  56.05 |  37.37 |
---------+----------+--------+--------+
TOTAL             .     1074     2272     3346
                  .    32.10    67.90   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      103.880   DF=   1  PROB=0.0001
PHI                              -0.176
CONTINGENCY COEFFICIENT           0.173
CRAMER'S V                        0.176
LIKELIHOOD RATIO CHISQUARE      103.282   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE      102.900   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0000
                    (2-TAIL)                       PROB=0.0000
```

Withdrawn

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  324
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY DELUSN43

S3NO_PSY     DELUSN43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .     |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        1 |     85 |   1810 |   1895
         |        . |    0.5 |   -0.5 |
         |        . |   2.54 |  54.09 |  56.63
         |        . |   4.49 |  95.51 |
         |        . |  57.05 |  56.62 |
---------+----------+--------+--------+
PRESENT  |        0 |     64 |   1387 |   1451
         |        . |   -0.5 |    0.5 |
         |        . |   1.91 |  41.45 |  43.37
         |        . |   4.41 |  95.59 |
         |        . |  42.95 |  43.38 |
---------+----------+--------+--------+
TOTAL             .      149     3197     3346
                  .     4.45    95.55   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          0.011    DF=    1  PROB=0.9173
PHI                                 0.002
CONTINGENCY COEFFICIENT             0.002
CRAMER'S V                          0.002
LIKELIHOOD RATIO CHISQUARE          0.011    DF=    1  PROB=0.9172
CONTINUITY ADJ. CHI-SQUARE          0.000    DF=    1  PROB=0.9846
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.4937
                    (2-TAIL)                           PROB=0.9328
```

Delusions

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  325
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY HOARDS43

S3NO_PSY     HOARDS43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |    .     |YES     |NO      |  TOTAL
---------+----------+--------+--------+
ABSENT   |        2 |    144 |   1750 |   1894
         |        . |   35.9 |  -35.9 |
         |        . |   4.30 |  52.32 |  56.62
         |        . |   7.60 |  92.40 |
         |        . |  75.39 |  55.49 |
---------+----------+--------+--------+
PRESENT  |        0 |     47 |   1404 |   1451
         |        . |  -35.9 |   35.9 |
         |        . |   1.41 |  41.97 |  43.38
         |        . |   3.24 |  96.76 |
         |        . |  24.61 |  44.51 |
---------+----------+--------+--------+
TOTAL             .      191     3154     3345
                  .     5.71    94.29   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         29.089    DF=    1  PROB=0.0001
PHI                                 0.093
CONTINGENCY COEFFICIENT             0.093
CRAMER'S V                          0.093
LIKELIHOOD RATIO CHISQUARE         30.825    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE         28.284    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0000
                    (2-TAIL)                           PROB=0.0000
```

Hoards

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  326
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3HO_PSY BY MANIPU43

S3HO_PSY     MANIPU43

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |      .    |YES     |NO      |  TOTAL
---------+-----------+--------+--------+
ABSENT   |      73   |    319 |   1504 |   1823
         |       .   |   99.4 |  -99.4 |
         |       .   |   9.85 |  46.45 |  56.30
         |       .   |  17.50 |  82.50 |
         |       .   |  81.79 |  52.81 |
---------+-----------+--------+--------+
PRESENT  |      38   |     71 |   1344 |   1415
         |       .   |  -99.4 |   99.4 |
         |       .   |   2.19 |  41.51 |  43.70
         |       .   |   5.02 |  94.98 |
         |       .   |  18.21 |  47.19 |
---------+-----------+--------+--------+
TOTAL            .        390     2848     3238
                 .      12.04    87.96   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          117.142   DF=   1  PROB=0.0001
PHI                                   0.190
CONTINGENCY COEFFICIENT               0.187
CRAMER'S V                            0.190
LIKELIHOOD RATIO CHISQUARE          128.000   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          115.968   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0000
                    (2-TAIL)                           PROB=0.0000
```

Manipulative

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  327
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3HO_PSY BY BOWL148A

S3HO_PSY     BOWL148A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1452 |    444 |   1896
         |  104.9 | -104.9 |
         |  43.38 |  13.27 |  56.65
         |  76.58 |  23.42 |
         |  61.06 |  45.82 |
---------+--------+--------+
PRESENT  |    926 |    525 |   1451
         | -104.9 |  104.9 |
         |  27.67 |  15.69 |  43.35
         |  63.82 |  36.18 |
         |  38.94 |  54.18 |
---------+--------+--------+
TOTAL        2378      969     3347
            71.05    28.95   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           65.106   DF=   1  PROB=0.0001
PHI                                   0.139
CONTINGENCY COEFFICIENT               0.138
CRAMER'S V                            0.139
LIKELIHOOD RATIO CHISQUARE           64.754   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE           64.488   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0000
                    (2-TAIL)                           PROB=0.0000
```

Bowel Program

```
SAS                                                                                14:02 TUESDAY, DECEMBER 24, 1985  328
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY DECU146A

S3N0_PSY     DECU146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1783 |    113 |   1896
         |   75.1 |  -75.1 |
         |  53.27 |   3.38 |  56.65
         |  94.04 |   5.96 |
         |  59.14 |  34.04 |
---------+--------+--------+
PRESENT  |   1232 |    219 |   1451
         |  -75.1 |   75.1 |
         |  36.81 |   6.54 |  43.35
         |  84.91 |  15.09 |
         |  40.86 |  65.96 |
---------+--------+--------+
TOTAL       3015      332     3347
           90.08     9.92   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          76.732    DF=    1  PROB=0.0001
PHI                                  0.151
CONTINGENCY COEFFICIENT              0.150
CRAMER'S V                           0.151
LIKELIHOOD RATIO CHISQUARE          76.368    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          75.713    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0000
                    (2-TAIL)                            PROB=0.0000
```

Decubitus Care

```
SAS                                                                                14:02 TUESDAY, DECEMBER 24, 1985  329
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY IMPN146A

S3N0_PSY     IMPN146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1807 |     89 |   1896
         |   59.4 |  -59.4 |
         |  53.99 |   2.66 |  56.65
         |  95.31 |   4.69 |
         |  58.57 |  33.97 |
---------+--------+--------+
PRESENT  |   1278 |    173 |   1451
         |  -59.4 |   59.4 |
         |  38.18 |   5.17 |  43.35
         |  88.08 |  11.92 |
         |  41.43 |  66.03 |
---------+--------+--------+
TOTAL       3085      262     3347
           92.17     7.83   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          59.529    DF=    1  PROB=0.0001
PHI                                  0.133
CONTINGENCY COEFFICIENT              0.132
CRAMER'S V                           0.133
LIKELIHOOD RATIO CHISQUARE          59.232    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          58.531    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0000
                    (2-TAIL)                            PROB=0.0000
```

Impaction

```
SAS                                                                 14:02 TUESDAY, DECEMBER 24, 1985  330
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY LAB146A

S3M0_PSY     LAB146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1685 |    211 |   1896
         |    9.9 |   -9.9 |
         |  50.34 |   6.30 |  56.65
         |  88.87 |  11.13 |
         |  56.98 |  54.10 |
---------+--------+--------+
PRESENT  |   1272 |    179 |   1451
         |   -9.9 |    9.9 |
         |  38.00 |   5.35 |  43.35
         |  87.66 |  12.34 |
         |  43.02 |  45.90 |
---------+--------+--------+
TOTAL        2957      390     3347
            88.35    11.65   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         1.164   DF=   1  PROB=0.2806
PHI                                0.019
CONTINGENCY COEFFICIENT            0.019
CRAMER'S V                         0.019
LIKELIHOOD RATIO CHISQUARE         1.160   DF=   1  PROB=0.2814
CONTINUITY ADJ. CHI-SQUARE         1.050   DF=   1  PROB=0.3056
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.1528
                    (2-TAIL)                        PROB=0.3017
```

Lab Tests

```
SAS                                                                 14:02 TUESDAY, DECEMBER 24, 1985  331
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY OXYG146A

S3M0_PSY     OXYG146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1873 |     23 |   1896
         |    0.8 |   -0.8 |
         |  55.96 |   0.69 |  56.65
         |  98.79 |   1.21 |
         |  56.67 |  54.76 |
---------+--------+--------+
PRESENT  |   1432 |     19 |   1451
         |   -0.8 |    0.8 |
         |  42.78 |   0.57 |  43.35
         |  98.69 |   1.31 |
         |  43.33 |  45.24 |
---------+--------+--------+
TOTAL        3305       42     3347
            98.75     1.25   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         0.062   DF=   1  PROB=0.8040
PHI                                0.004
CONTINGENCY COEFFICIENT            0.004
CRAMER'S V                         0.004
LIKELIHOOD RATIO CHISQUARE         0.061   DF=   1  PROB=0.8043
CONTINUITY ADJ. CHI-SQUARE         0.008   DF=   1  PROB=0.9271
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.4609
                    (2-TAIL)                        PROB=0.8758
```

Oxygen Therapy

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  332
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY PAIN148A

S3N0_PSY     PAIN148A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1757 |    139 |   1896
         |  -33.1 |   33.1 |
         |  52.49 |   4.15 |  56.65
         |  92.67 |   7.33 |
         |  55.60 |  74.33 |
---------+--------+--------+
PRESENT  |   1403 |     48 |   1451
         |   33.1 |  -33.1 |
         |  41.92 |   1.43 |  43.35
         |  96.69 |   3.31 |
         |  44.40 |  25.67 |
---------+--------+--------+
TOTAL        3160      187     3347
            94.41     5.59   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       25.221   DF=   1  PROB=0.0001
PHI                              -0.087
CONTINGENCY COEFFICIENT           0.086
CRAMER'S V                        0.087
LIKELIHOOD RATIO CHISQUARE       26.621   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       24.464   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0000
                    (2-TAIL)                       PROB=0.0000
```

Pain Control

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  333
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY ROM148A

S3N0_PSY     ROM148A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1240 |    656 |   1896
         |  236.2 | -236.2 |
         |  37.05 |  19.60 |  56.65
         |  65.40 |  34.60 |
         |  69.98 |  41.65 |
---------+--------+--------+
PRESENT  |    532 |    919 |   1451
         | -236.2 |  236.2 |
         |  15.89 |  27.46 |  43.35
         |  36.66 |  63.34 |
         |  30.02 |  58.35 |
---------+--------+--------+
TOTAL        1772     1575     3347
            52.94    47.06   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      272.448   DF=   1  PROB=0.0001
PHI                               0.285
CONTINGENCY COEFFICIENT           0.274
CRAMER'S V                        0.285
LIKELIHOOD RATIO CHISQUARE      275.716   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE      271.296   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0000
                    (2-TAIL)                       PROB=0.0000
```

Range of Motion

187

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  334
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY REAL146A

S3NO_PSY     REAL146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1498 |    398 |   1896
         |  131.7 | -131.7 |
         |  44.76 |  11.89 |  56.65
         |  79.01 |  20.99 |
         |  62.11 |  42.57 |
---------+--------+--------+
PRESENT  |    914 |    537 |   1451
         | -131.7 |  131.7 |
         |  27.31 |  16.04 |  43.35
         |  62.99 |  37.01 |
         |  37.89 |  57.43 |
---------+--------+--------+
TOTAL        2412      935     3347
            72.06    27.94   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       104.751   DF=   1  PROB=0.0001
PHI                                0.177
CONTINGENCY COEFFICIENT            0.174
CRAMER'S V                         0.177
LIKELIHOOD RATIO CHISQUARE       104.215   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       103.966   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Reality Orientation

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  335
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY STIM146A

S3NO_PSY     STIM146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1719 |    177 |   1896
         |  126.1 | -126.1 |
         |  51.36 |   5.29 |  56.65
         |  90.66 |   9.34 |
         |  61.13 |  33.08 |
---------+--------+--------+
PRESENT  |   1093 |    358 |   1451
         | -126.1 |  126.1 |
         |  32.66 |  10.70 |  43.35
         |  75.33 |  24.67 |
         |  38.87 |  66.92 |
---------+--------+--------+
TOTAL        2812      535     3347
            84.02    15.98   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       143.974   DF=   1  PROB=0.0001
PHI                                0.207
CONTINGENCY COEFFICIENT            0.203
CRAMER'S V                         0.207
LIKELIHOOD RATIO CHISQUARE       143.563   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       142.834   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Sensory Stimulation

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  336
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY SKIN146A

S3N0_PSY     SKIN146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1059 |    837 |   1896
         |  288.0 | -288.0 |
         |  31.64 |  25.01 |  56.65
         |  55.85 |  44.15 |
         |  77.81 |  42.15 |
---------+--------+--------+
PRESENT  |    302 |   1149 |   1451
         | -288.0 |  288.0 |
         |   9.02 |  34.33 |  43.35
         |  20.81 |  79.19 |
         |  22.19 |  57.85 |
---------+--------+--------+
TOTAL        1361     1986     3347
            40.66    59.34   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      418.294   DF=   1  PROB=0.0001
PHI                               0.354
CONTINGENCY COEFFICIENT           0.333
CRAMER'S V                        0.354
LIKELIHOOD RATIO CHISQUARE      435.879   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE      416.843   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0000
                    (2-TAIL)                       PROB=0.0000
```

Skin Care

Rensselaer Polytechnic Institute

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SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  337
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY SPLN146A

S3N0_PSY     SPLN146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1806 |     90 |   1896
         |    9.1 |   -9.1 |
         |  53.96 |   2.69 |  56.65
         |  95.25 |   4.75 |
         |  56.94 |  51.43 |
---------+--------+--------+
PRESENT  |   1366 |     85 |   1451
         |   -9.1 |    9.1 |
         |  40.81 |   2.54 |  43.35
         |  94.14 |   5.86 |
         |  43.06 |  48.57 |
---------+--------+--------+
TOTAL        3172      175     3347
            94.77     5.23   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        2.048   DF=   1  PROB=0.1524
PHI                               0.025
CONTINGENCY COEFFICIENT           0.025
CRAMER'S V                        0.025
LIKELIHOOD RATIO CHISQUARE        2.034   DF=   1  PROB=0.1538
CONTINUITY ADJ. CHI-SQUARE        1.830   DF=   1  PROB=0.1761
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.0884
                    (2-TAIL)                       PROB=0.1589
```

Splint Assistance

```
SAS                                                                14:02 TUESDAY, DECEMBER 24, 1985  338
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY STER146A

S3N0_PSY     STER146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1788 |    108 |   1896
         |   35.3 |  -35.3 |
         |  53.42 |   3.23 |  56.65
         |  94.30 |   5.70 |
         |  57.79 |  42.69 |
---------+--------+--------+
PRESENT  |   1306 |    145 |   1451
         |  -35.3 |   35.3 |
         |  39.02 |   4.33 |  43.35
         |  90.01 |   9.99 |
         |  42.21 |  57.31 |
---------+--------+--------+
TOTAL       3094      253     3347
           92.44     7.56   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         21.719   DF=   1  PROB=0.0001
PHI                                 0.081
CONTINGENCY COEFFICIENT             0.080
CRAMER'S V                          0.081
LIKELIHOOD RATIO CHISQUARE         21.485   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE         21.106   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0000
                    (2-TAIL)                         PROB=0.0000
```

Sterile Dressing

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SAS                                                                14:02 TUESDAY, DECEMBER 24, 1985  339
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY AMBU146A

S3N0_PSY     AMBU146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1590 |    306 |   1896
         |   -5.2 |    5.2 |
         |  47.51 |   9.14 |  56.65
         |  83.86 |  16.14 |
         |  56.46 |  57.63 |
---------+--------+--------+
PRESENT  |   1226 |    225 |   1451
         |    5.2 |   -5.2 |
         |  36.63 |   6.72 |  43.35
         |  84.49 |  15.51 |
         |  43.54 |  42.37 |
---------+--------+--------+
TOTAL       2816      531     3347
           84.14    15.86   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          0.247   DF=   1  PROB=0.6196
PHI                                -0.009
CONTINGENCY COEFFICIENT             0.009
CRAMER'S V                          0.009
LIKELIHOOD RATIO CHISQUARE          0.247   DF=   1  PROB=0.6193
CONTINUITY ADJ. CHI-SQUARE          0.201   DF=   1  PROB=0.6536
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.3272
                    (2-TAIL)                         PROB=0.6333
```

Ambulation Training

```
SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985  340
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY BOBL146A

S3NO_PSY     BOBL146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1807 |     89 |   1896
         |   11.8 |  -11.8 |
         |  53.99 |   2.66 |  56.65
         |  95.31 |   4.69 |
         |  57.02 |  50.00 |
---------+--------+--------+
PRESENT  |   1362 |     89 |   1451
         |  -11.8 |   11.8 |
         |  40.69 |   2.66 |  43.35
         |  93.87 |   6.13 |
         |  42.98 |  50.00 |
---------+--------+--------+
TOTAL        3169      178     3347
            94.68     5.32   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          3.383    DF=    1  PROB=0.0659
PHI                                 0.032
CONTINGENCY COEFFICIENT             0.032
CRAMER'S V                          0.032
LIKELIHOOD RATIO CHISQUARE          3.356    DF=    1  PROB=0.0670
CONTINUITY ADJ. CHI-SQUARE          3.103    DF=    1  PROB=0.0781
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0396
                    (2-TAIL)                           PROB=0.0737
```

Bowel/Bladder Training

```
SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985  341
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY DRES146A

S3NO_PSY     DRES146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1798 |     98 |   1896
         |  -31.7 |   31.7 |
         |  53.72 |   2.93 |  56.65
         |  94.83 |   5.17 |
         |  55.67 |  83.76 |
---------+--------+--------+
PRESENT  |   1432 |     19 |   1451
         |   31.7 |  -31.7 |
         |  42.78 |   0.57 |  43.35
         |  98.69 |   1.31 |
         |  44.33 |  16.24 |
---------+--------+--------+
TOTAL        3230      117     3347
            96.50     3.50   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         36.291    DF=    1  PROB=0.0001
PHI                                -0.104
CONTINGENCY COEFFICIENT             0.104
CRAMER'S V                          0.104
LIKELIHOOD RATIO CHISQUARE         40.611    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE         35.156    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0000
                    (2-TAIL)                           PROB=0.0000
```

Dressing Training

```
SAS                                                               14:02 TUESDAY, DECEMBER 24, 1985 342
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY ADL146A

S3NO_PSY     ADL146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1849 |     47 |   1896
         |  -15.8 |   15.8 |
         |  55.24 |   1.40 |  56.65
         |  97.52 |   2.48 |
         |  56.17 |  85.45 |
---------+--------+--------+
PRESENT  |   1443 |      8 |   1451
         |   15.8 |  -15.8 |
         |  43.11 |   0.24 |  43.35
         |  99.45 |   0.55 |
         |  43.83 |  14.55 |
---------+--------+--------+
TOTAL        3292       55     3347
            98.36     1.64   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         18.895    DF=    1  PROB=0.0001
PHI                                -0.075
CONTINGENCY COEFFICIENT             0.075
CRAMER'S V                          0.075
LIKELIHOOD RATIO CHISQUARE         21.463    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE         17.722    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0000
                    (2-TAIL)                           PROB=0.0000
```

IADL Training

```
SAS                                                               14:02 TUESDAY, DECEMBER 24, 1985 343
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY MEAL146A

S3NO_PSY     MEAL146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1847 |     49 |   1896
         |   -6.5 |    6.5 |
         |  55.18 |   1.46 |  56.65
         |  97.42 |   2.58 |
         |  56.45 |  65.33 |
---------+--------+--------+
PRESENT  |   1425 |     26 |   1451
         |    6.5 |   -6.5 |
         |  42.58 |   0.78 |  43.35
         |  98.21 |   1.79 |
         |  43.55 |  34.67 |
---------+--------+--------+
TOTAL        3272       75     3347
            97.76     2.24   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          2.347    DF=    1  PROB=0.1247
PHI                                -0.027
CONTINGENCY COEFFICIENT             0.027
CRAMER'S V                          0.027
LIKELIHOOD RATIO CHISQUARE          2.405    DF=    1  PROB=0.1208
CONTINUITY ADJ. CHI-SQUARE          2.009    DF=    1  PROB=0.1564
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0772
                    (2-TAIL)                           PROB=0.1569
```

Meal Prep Training

192

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SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985  344
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3HO_PSY BY TRFR146A

S3HO_PSY     TRFR146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1684 |    212 |   1896
         |  -33.0 |   33.0 |
         |  50.31 |   6.33 |  56.65
         |  88.82 |  11.18 |
         |  55.56 |  67.09 |
---------+--------+--------+
PRESENT  |   1347 |    104 |   1451
         |   33.0 |  -33.0 |
         |  40.24 |   3.11 |  43.35
         |  92.83 |   7.17 |
         |  44.44 |  32.91 |
---------+--------+--------+
TOTAL        3031      316     3347
            90.56     9.44   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        16.489   DF=   1  PROB=0.0001
PHI                               -0.068
CONTINGENCY COEFFICIENT            0.068
CRAMER'S V                         0.068
LIKELIHOOD RATIO CHISQUARE        16.872   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        16.024   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0001
```

Transfer Training

```
SAS                                                                         14:02 TUESDAY, DECEMBER 24, 1985  346
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3HO_PSY BY TURN146A

S3HO_PSY     TURN146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1453 |    443 |   1896
         |  299.7 | -299.7 |
         |  43.41 |  13.24 |  56.65
         |  76.64 |  23.36 |
         |  71.37 |  33.79 |
---------+--------+--------+
PRESENT  |    583 |    868 |   1451
         | -299.7 |  299.7 |
         |  17.42 |  25.93 |  43.35
         |  40.18 |  59.82 |
         |  28.63 |  66.21 |
---------+--------+--------+
TOTAL        2036     1311     3347
            60.83    39.17   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       468.474   DF=   1  PROB=0.0001
PHI                                0.370
CONTINGENCY COEFFICIENT            0.347
CRAMER'S V                         0.370
LIKELIHOOD RATIO CHISQUARE       464.946   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       466.946   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Turning & Positioning

Wound Care

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY WUND146A

S3N0_PSY     WUND146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1748 |    148 |   1896
         |   16.3 |  -16.3 |
         |  52.23 |   4.42 |  56.65
         |  92.19 |   7.81 |
         |  57.18 |  51.03 |
---------+--------+--------+
PRESENT  |   1309 |    142 |   1451
         |  -16.3 |   16.3 |
         |  39.11 |   4.24 |  43.35
         |  90.21 |   9.79 |
         |  42.82 |  48.97 |
---------+--------+--------+
TOTAL        3057      290     3347
            91.34     8.66   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          4.074   DF=   1  PROB=0.0436
PHI                                 0.035
CONTINGENCY COEFFICIENT             0.035
CRAMER'S V                          0.035
LIKELIHOOD RATIO CHISQUARE          4.045   DF=   1  PROB=0.0443
CONTINUITY ADJ. CHI-SQUARE          3.827   DF=   1  PROB=0.0504
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0255
                    (2-TAIL)                         PROB=0.0472
```

Other General Traits

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY OGEN146A

S3N0_PSY     OGEN146A

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1609 |    287 |   1896
         |  -24.7 |   24.7 |
         |  48.07 |   8.57 |  56.65
         |  84.86 |  15.14 |
         |  55.79 |  61.99 |
---------+--------+--------+
PRESENT  |   1275 |    176 |   1451
         |   24.7 |  -24.7 |
         |  38.09 |   5.26 |  43.35
         |  87.87 |  12.13 |
         |  44.21 |  38.01 |
---------+--------+--------+
TOTAL        2884      463     3347
            86.17    13.83   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          6.238   DF=   1  PROB=0.0125
PHI                                -0.043
CONTINGENCY COEFFICIENT             0.043
CRAMER'S V                          0.043
LIKELIHOOD RATIO CHISQUARE          6.300   DF=   1  PROB=0.0121
CONTINUITY ADJ. CHI-SQUARE          5.988   DF=   1  PROB=0.0144
FISHER'S EXACT TEST (1-TAIL)                         PROB=0.0070
                    (2-TAIL)                         PROB=0.0133
```

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  348
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3MO_PSY BY CHEM1468

S3MO_PSY     CHEM1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1886 |     10 |   1896
         |   -3.8 |    3.8 |
         |  56.35 |   0.30 |  56.65
         |  99.47 |   0.53 |
         |  56.53 |  90.91 |
---------+--------+--------+
PRESENT  |   1460 |      1 |   1461
         |    3.8 |   -3.8 |
         |  43.32 |   0.03 |  43.35
         |  99.93 |   0.07 |
         |  43.47 |   9.09 |
---------+--------+--------+
TOTAL        3336       11     3347
            99.67     0.33   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                          5.276    DF=    1  PROB=0.0216
PHI                                -0.040
CONTINGENCY COEFFICIENT             0.040
CRAMER'S V                          0.040
LIKELIHOOD RATIO CHISQUARE          6.353    DF=    1  PROB=0.0117
CONTINUITY ADJ. CHI-SQUARE          3.958    DF=    1  PROB=0.0464
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.0180
                    (2-TAIL)                           PROB=0.0290
```

Chemotherapy

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  349
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3MO_PSY BY DOSE1468

S3MO_PSY     DOSE1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1803 |     93 |   1896
         |   -7.5 |    7.5 |
         |  53.87 |   2.78 |  56.65
         |  95.09 |   4.91 |
         |  56.41 |  61.59 |
---------+--------+--------+
PRESENT  |   1393 |     58 |   1451
         |    7.5 |   -7.5 |
         |  41.62 |   1.73 |  43.35
         |  96.00 |   4.00 |
         |  43.59 |  38.41 |
---------+--------+--------+
TOTAL        3196      151     3347
            95.49     4.51   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          1.572    DF=    1  PROB=0.2098
PHI                                -0.022
CONTINGENCY COEFFICIENT             0.022
CRAMER'S V                          0.022
LIKELIHOOD RATIO CHISQUARE          1.589    DF=    1  PROB=0.2075
CONTINUITY ADJ. CHI-SQUARE          1.369    DF=    1  PROB=0.2420
FISHER'S EXACT TEST (1-TAIL)                           PROB=0.1207
                    (2-TAIL)                           PROB=0.2394
```

Dose Change

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1986  350
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY MNTR146B

S3M0_PSY     MNTR146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1674 |    222 |   1896
         |   10.8 |  -10.8 |
         |  50.01 |   6.63 |  56.65
         |  88.29 |  11.71 |
         |  57.02 |  54.01 |
---------+--------+--------+
PRESENT  |   1262 |    189 |   1451
         |  -10.8 |   10.8 |
         |  37.71 |   5.65 |  43.35
         |  86.97 |  13.03 |
         |  42.98 |  45.99 |
---------+--------+--------+
TOTAL        2936      411     3347
            87.72    12.28   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                         1.323   DF=   1  PROB=0.2501
PHI                                0.020
CONTINGENCY COEFFICIENT            0.020
CRAMER'S V                         0.020
LIKELIHOOD RATIO CHISQUARE         1.318   DF=   1  PROB=0.2510
CONTINUITY ADJ. CHI-SQUARE         1.203   DF=   1  PROB=0.2726
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.1364
                    (2-TAIL)                        PROB=0.2646
```

Medical Monitoring

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1986  351
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY HOME146B

S3M0_PSY     HOME146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1895 |      1 |   1896
         |   -0.4 |    0.4 |
         |  56.62 |   0.03 |  56.65
         |  99.95 |   0.05 |
         |  56.63 | 100.00 |
---------+--------+--------+
PRESENT  |   1451 |      0 |   1451
         |    0.4 |   -0.4 |
         |  43.35 |   0.00 |  43.35
         | 100.00 |   0.00 |
         |  43.37 |   0.00 |
---------+--------+--------+
TOTAL        3346        1     3347
            99.97     0.03   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                         0.766   DF=   1  PROB=0.3816
PHI                               -0.015
CONTINGENCY COEFFICIENT            0.015
CRAMER'S V                         0.015
LIKELIHOOD RATIO CHISQUARE         1.137   DF=   1  PROB=0.2863
CONTINUITY ADJ. CHI-SQUARE         0.018   DF=   1  PROB=0.8933
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.5665
                    (2-TAIL)                        PROB=1.0000
```

Home Visitation

```
SAS                                                                                    14:02 TUESDAY, DECEMBER 24, 1985  352
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3MO_PSY BY ALMN146B

S3MO_PSY     ALMN146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1892 |      4 |   1896
         |    2.2 |   -2.2 |
         |  56.53 |   0.12 |  56.65
         |  99.79 |   0.21 |
         |  56.71 |  36.36 |
---------+--------+--------+
PRESENT  |   1444 |      7 |   1451
         |   -2.2 |    2.2 |
         |  43.14 |   0.21 |  43.35
         |  99.52 |   0.48 |
         |  43.29 |  63.64 |
---------+--------+--------+
TOTAL        3336       11     3347
            99.67     0.33   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                        1.849   DF=   1  PROB=0.1739
PHI                               0.024
CONTINGENCY COEFFICIENT           0.023
CRAMER'S V                        0.024
LIKELIHOOD RATIO CHISQUARE        1.833   DF=   1  PROB=0.1757
CONTINUITY ADJ. CHI-SQUARE        1.113   DF=   1  PROB=0.2914
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.1459
                    (2-TAIL)                       PROB=0.2258
```

Hyper alimentation

```
SAS                                                                                    14:02 TUESDAY, DECEMBER 24, 1985  353
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3MO_PSY BY SINJ146B

S3MO_PSY     SINJ146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1760 |    136 |   1896
         |   -9.1 |    9.1 |
         |  52.58 |   4.06 |  56.65
         |  92.83 |   7.17 |
         |  56.36 |  60.71 |
---------+--------+--------+
PRESENT  |   1363 |     88 |   1451
         |    9.1 |   -9.1 |
         |  40.72 |   2.63 |  43.35
         |  93.94 |   6.06 |
         |  43.64 |  39.29 |
---------+--------+--------+
TOTAL        3123      224     3347
            93.31     6.69   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        1.617   DF=   1  PROB=0.2035
PHI                              -0.022
CONTINGENCY COEFFICIENT           0.022
CRAMER'S V                        0.022
LIKELIHOOD RATIO CHISQUARE        1.629   DF=   1  PROB=0.2018
CONTINUITY ADJ. CHI-SQUARE        1.444   DF=   1  PROB=0.2295
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.1145
                    (2-TAIL)                       PROB=0.2097
```

Single Injection

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985  354
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY MINJ146B

S3M0_PSY     MINJ146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1835 |     61 |   1896
         |    7.0 |   -7.0 |
         |  54.83 |   1.82 |  56.65
         |  96.78 |   3.22 |
         |  56.86 |  50.83 |
---------+--------+--------+
PRESENT  |   1392 |     59 |   1451
         |   -7.0 |    7.0 |
         |  41.59 |   1.76 |  43.35
         |  95.93 |   4.07 |
         |  43.14 |  49.17 |
---------+--------+--------+
TOTAL        3227      120     3347
            96.41     3.59   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        1.713    DF=   1  PROB=0.1906
PHI                               0.023
CONTINGENCY COEFFICIENT           0.023
CRAMER'S V                        0.023
LIKELIHOOD RATIO CHISQUARE        1.700    DF=   1  PROB=0.1923
CONTINUITY ADJ. CHI-SQUARE        1.477    DF=   1  PROB=0.2243
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.1124
                    (2-TAIL)                        PROB=0.1908
```

Multiple Injection

```
SAS                                                                      14:02 TUESDAY, DECEMBER 24, 1985  355
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY IOFL146B

S3M0_PSY     IOFL146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1784 |    112 |   1896
         |   73.8 |  -73.8 |
         |  53.30 |   3.35 |  56.65
         |  94.09 |   5.91 |
         |  59.09 |  34.15 |
---------+--------+--------+
PRESENT  |   1235 |    216 |   1451
         |  -73.8 |   73.8 |
         |  36.90 |   6.45 |  43.35
         |  85.11 |  14.89 |
         |  40.91 |  65.85 |
---------+--------+--------+
TOTAL        3019      328     3347
            90.20     9.80   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       74.971    DF=   1  PROB=0.0001
PHI                               0.150
CONTINGENCY COEFFICIENT           0.148
CRAMER'S V                        0.150
LIKELIHOOD RATIO CHISQUARE       74.604    DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE       73.968    DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Intake/output of Fluids

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  356
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY NGFD1468

S3M0_PSY     NGFD1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1890 |      6 |   1896
         |   32.0 |  -32.0 |
         |  56.47 |   0.18 |  56.65
         |  99.68 |   0.32 |
         |  57.62 |   8.96 |
---------+--------+--------+
PRESENT  |   1390 |     61 |   1451
         |  -32.0 |   32.0 |
         |  41.53 |   1.82 |  43.35
         |  95.80 |   4.20 |
         |  42.38 |  91.04 |
---------+--------+--------+
TOTAL        3280       67     3347
            98.00     2.00   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                          83.323    DF=    1  PROB=0.0001
PHI                                  0.158
CONTINGENCY COEFFICIENT              0.156
CRAMER'S V                           0.158
LIKELIHOOD RATIO CHISQUARE          69.668    DF=    1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE          81.357    DF=    1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0000
                    (2-TAIL)                            PROB=0.0000
```

Nasal Gastric Feeding

```
SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  357
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY PRTL1468

S3M0_PSY     PRTL1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |AB  NT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1886 |     10 |   1896
         |    5.3 |   -5.3 |
         |  56.35 |   0.30 |  56.65
         |  99.47 |   0.53 |
         |  56.81 |  37.04 |
---------+--------+--------+
PRESENT  |   1434 |     17 |   1451
         |   -5.3 |    5.3 |
         |  42.84 |   0.51 |  43.35
         |  98.83 |   1.17 |
         |  43.19 |  62.96 |
---------+--------+--------+
TOTAL        3320       27     3347
            99.19     0.81   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                           4.283    DF=    1  PROB=0.0390
PHI                                  0.036
CONTINGENCY COEFFICIENT              0.036
CRAMER'S V                           0.036
LIKELIHOOD RATIO CHISQUARE           4.224    DF=    1  PROB=0.0399
CONTINUITY ADJ. CHI-SQUARE           3.496    DF=    1  PROB=0.0615
FISHER'S EXACT TEST (1-TAIL)                            PROB=0.0313
                    (2-TAIL)                            PROB=0.0500
```

Parenteral Feeding

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  358
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY RADN1468

S3M0_PSY     RADN1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |  TOTAL
---------+--------+
ABSENT   |   1896 |   1896
         |    0.0 |
         |  56.65 |  56.65
         | 100.00 |
         |  56.65 |
---------+--------+
PRESENT  |   1451 |   1451
         |    0.0 |
         |  43.35 |  43.35
         | 100.00 |
         |  43.35 |
---------+--------+
TOTAL       3347     3347
          100.00   100.00
```

Radiation Therapy

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  359
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY RSPY1468

S3M0_PSY     RSPY1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1872 |     24 |   1896
         |    2.1 |   -2.1 |
         |  55.93 |   0.72 |  56.65
         |  98.73 |   1.27 |
         |  56.71 |  52.17 |
---------+--------+--------+
PRESENT  |   1429 |     22 |   1451
         |   -2.1 |    2.1 |
         |  42.69 |   0.66 |  43.35
         |  98.48 |   1.52 |
         |  43.29 |  47.83 |
---------+--------+--------+
TOTAL       3301       46     3347
           98.63     1.37   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      0.380   DF=   1  PROB=0.5376
PHI                             0.011
CONTINGENCY COEFFICIENT         0.011
CRAMER'S V                      0.011
LIKELIHOOD RATIO CHISQUARE      0.378   DF=   1  PROB=0.5389
CONTINUITY ADJ. CHI-SQUARE      0.218   DF=   1  PROB=0.6407
FISHER'S EXACT TEST (1-TAIL)                     PROB=0.3188
                    (2-TAIL)                     PROB=0.6521
```

Respiratory Care

200

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  380
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M6_PSY BY SUCT146B

S3M6_PSY     SUCT146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1890 |      6 |   1896
         |   18.9 |  -18.9 |
         |  56.47 |   0.18 |  56.65
         |  99.68 |   0.32 |
         |  57.22 |  13.64 |
---------+--------+--------+
PRESENT  |   1413 |     38 |   1451
         |  -18.9 |   18.9 |
         |  42.22 |   1.14 |  43.35
         |  97.38 |   2.62 |
         |  42.78 |  86.36 |
---------+--------+--------+
TOTAL        3303       44     3347
            98.69     1.31   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        33.587   DF=   1  PROB=0.0001
PHI                                0.100
CONTINGENCY COEFFICIENT            0.100
CRAMER'S V                         0.100
LIKELIHOOD RATIO CHISQUARE        38.732   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        31.836   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Suctioning

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  381
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M6_PSY BY DSCH146B

S3M6_PSY     DSCH146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1855 |     41 |   1896
         |  -16.6 |   16.6 |
         |  55.42 |   1.22 |  56.65
         |  97.84 |   2.16 |
         |  56.14 |  95.35 |
---------+--------+--------+
PRESENT  |   1449 |      2 |   1451
         |   16.6 |  -16.6 |
         |  43.29 |   0.06 |  43.35
         |  99.86 |   0.14 |
         |  43.86 |   4.65 |
---------+--------+--------+
TOTAL        3304       43     3347
            98.72     1.28   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                        28.567   DF=   1  PROB=0.0001
PHI                               -0.089
CONTINGENCY COEFFICIENT            0.089
CRAMER'S V                         0.089
LIKELIHOOD RATIO CHISQUARE        34.109   DF=   1  PROB=0.0001
CONTINUITY ADJ. CHI-SQUARE        24.994   DF=   1  PROB=0.0001
FISHER'S EXACT TEST (1-TAIL)                        PROB=0.0000
                    (2-TAIL)                        PROB=0.0000
```

Discharge Training

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  362
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY TRAC146B

S3M0_PSY     TRAC146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1894 |      2 |   1896
         |    2.0 |   -2.0 |
         |  56.59 |   0.06 |  56.65
         |  99.89 |   0.11 |
         |  56.71 |  28.57 |
---------+--------+--------+
PRESENT  |   1446 |      5 |   1451
         |   -2.0 |    2.0 |
         |  43.20 |   0.15 |  43.35
         |  99.66 |   0.34 |
         |  43.29 |  71.43 |
---------+--------+--------+
TOTAL        3340        7     3347
            99.79     0.21   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                      2.252    DF=    1  PROB=0.1336
PHI                             0.026
CONTINGENCY COEFFICIENT         0.026
CRAMER'S V                      0.026
LIKELIHOOD RATIO CHISQUARE      2.260    DF=    1  PROB=0.1327
CONTINUITY ADJ. CHI-SQUARE      1.252    DF=    1  PROB=0.2632
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.1321
                    (2-TAIL)                       PROB=0.2509
```

Trach Care

```
SAS                                                                    14:02 TUESDAY, DECEMBER 24, 1985  363
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3M0_PSY BY TRFN146B

S3M0_PSY     TRFN146B

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1891 |      5 |   1896
         |   -1.6 |    1.6 |
         |  56.50 |   0.15 |  56.65
         |  99.74 |   0.26 |
         |  56.60 |  83.33 |
---------+--------+--------+
PRESENT  |   1460 |      1 |   1461
         |    1.6 |   -1.6 |
         |  43.32 |   0.03 |  43.35
         |  99.93 |   0.07 |
         |  43.40 |  16.67 |
---------+--------+--------+
TOTAL        3341        6     3347
            99.82     0.18   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                      1.743    DF=    1  PROB=0.1868
PHI                            -0.023
CONTINGENCY COEFFICIENT         0.023
CRAMER'S V                      0.023
LIKELIHOOD RATIO CHISQUARE      1.951    DF=    1  PROB=0.1625
CONTINUITY ADJ. CHI-SQUARE      0.824    DF=    1  PROB=0.3639
FISHER'S EXACT TEST (1-TAIL)                       PROB=0.1846
                    (2-TAIL)                       PROB=0.2431
```

Transfusion

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY OSPC1468

S3N0_PSY     OSPC1468

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |ABSENT  |PRESENT |  TOTAL
---------+--------+--------+
ABSENT   |   1775 |    121 |   1896
         |   18.9 |  -18.9 |
         |  53.03 |   3.62 |  56.65
         |  93.62 |   6.38 |
         |  57.26 |  48.99 |
---------+--------+--------+
PRESENT  |   1325 |    126 |   1451
         |  -18.9 |   18.9 |
         |  39.59 |   3.76 |  43.35
         |  91.32 |   8.68 |
         |  42.74 |  51.01 |
---------+--------+--------+
TOTAL        3100      247     3347
            92.62     7.38   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      6.372   DF=    1  PROB=0.0116
PHI                             0.044
CONTINGENCY COEFFICIENT         0.044
CRAMER'S V                      0.044
LIKELIHOOD RATIO CHISQUARE      6.315   DF=    1  PROB=0.0120
CONTINUITY ADJ. CHI-SQUARE      6.039   DF=    1  PROB=0.0140
FISHER'S EXACT TEST (1-TAIL)                      PROB=0.0072
                    (2-TAIL)                      PROB=0.0135
```

Offer Special Treatments

```
SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY ASSESS47

S3N0_PSY     ASSESS47

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|       7|       8|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |       3|      13|      87|     236|     901|     420|     163|      27|      46|   1893
         |       .|    -6.8|     0.9|     4.8|  -184.0|   138.4|    42.9|     2.6|     1.2|
         |       .|    0.39|    2.60|    7.06|   26.97|   12.57|    4.88|    0.81|    1.38|  56.66
         |       .|    0.69|    4.60|   12.47|   47.60|   22.19|    8.61|    1.43|    2.43|
         |       .|   37.14|   57.24|   57.84|   47.05|   84.51|   76.89|   62.79|   58.23|
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |       3|      22|      65|     172|    1014|      77|      49|      16|      33|   1448
         |       .|     6.8|    -0.9|    -4.8|   184.0|  -138.4|   -42.9|    -2.6|    -1.2|
         |       .|    0.66|    1.95|    5.15|   30.35|    2.30|    1.47|    0.48|    0.99|  43.34
         |       .|    1.52|    4.49|   11.88|   70.03|    5.32|    3.38|    1.10|    2.28|
         |       .|   62.86|   42.76|   42.16|   52.95|   15.49|   23.11|   37.21|   41.77|
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           .       35      152      408     1915      497      212       43       79     3341
                .     1.05     4.55    12.21    57.32    14.88     6.35     1.29     2.36   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    270.710   DF=    7  PROB=0.0001
PHI                             0.285
CONTINGENCY COEFFICIENT         0.274
CRAMER'S V                      0.285
LIKELIHOOD RATIO CHISQUARE    292.908   DF=    7  PROB=0.0001
```

Physician Visits for Assessment

```
SAS                                                                                    14:02 TUESDAY, DECEMBER 24, 1985  356
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY ORDER47

S3N0_PSY     ORDER47

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|       7|       8|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |       2|      13|      69|     114|    1049|     476|     126|       1|      46|   1894
         |       .|    -1.7|     3.3|     3.0|  -197.1|   143.5|    47.8|    -0.1|     1.3|
         |       .|    0.39|    2.06|    3.41|   31.37|   14.23|    3.77|    0.03|    1.38|  56.64
         |       .|    0.69|    3.64|    6.02|   55.39|   25.13|    6.65|    0.05|    2.43|
         |       .|   50.00|   59.48|   58.16|   47.68|   81.09|   91.30|   50.00|   58.23|
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |       1|      13|      47|      82|    1151|     111|      12|       1|      33|   1450
         |       .|     1.7|    -3.3|    -3.0|   197.1|  -143.5|   -47.8|     0.1|    -1.3|
         |       .|    0.39|    1.41|    2.45|   34.42|    3.32|    0.36|    0.03|    0.99|  43.36
         |       .|    0.90|    3.24|    5.66|   79.38|    7.66|    0.83|    0.07|    2.28|
         |       .|   50.00|   40.52|   41.84|   52.32|   18.91|    8.70|   50.00|   41.77|
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL            .       26      116      196     2200      587      138        2       79     3344
                 .     0.78     3.47     5.86    65.79    17.55     4.13     0.06     2.36   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     283.443    DF=   7  PROB=0.0001
PHI                              0.291
CONTINGENCY COEFFICIENT          0.280
CRAMER'S V                       0.291
LIKELIHOOD RATIO CHISQUARE     311.436    DF=   7  PROB=0.0001
```

Physician Visits for Orders

```
SAS                                                                                    14:02 TUESDAY, DECEMBER 24, 1985  357
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY PROCS47

S3N0_PSY     PROCS47

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|       7|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      77|       6|      26|      43|      65|      42|      87|    1550|   1819
         |       .|    -1.3|     3.5|     6.4|    -4.2|    11.6|    -5.9|   -10.0|
         |       .|    0.19|    0.80|    1.33|    2.01|    1.30|    2.69|   47.97|  56.30
         |       .|    0.33|    1.43|    2.36|    3.57|    2.31|    4.78|   85.21|
         |       .|   46.15|   65.00|   66.15|   52.85|   77.78|   52.73|   55.94|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      39|       7|      14|      22|      58|      12|      78|    1221|   1412
         |       .|     1.3|    -3.5|    -6.4|     4.2|   -11.6|     5.9|    10.0|
         |       .|    0.22|    0.43|    0.68|    1.80|    0.37|    2.41|   37.79|  43.70
         |       .|    0.50|    0.99|    1.56|    4.11|    0.85|    5.52|   86.47|
         |       .|   53.85|   35.00|   33.85|   47.15|   22.22|   47.27|   44.06|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL            .       13       40       65      123       54      165     2771     3231
                 .     0.40     1.24     2.01     3.81     1.67     5.11    85.76   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                      16.066    DF=   6  PROB=0.0134
PHI                              0.071
CONTINGENCY COEFFICIENT          0.070
CRAMER'S V                       0.071
LIKELIHOOD RATIO CHISQUARE      16.932    DF=   6  PROB=0.0095
```

Physician Visits for Treatment

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SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1986  368
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY ADM#47

S3N0_PSY     ADM#47

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .  |       1 |       2 |       3 |       4 |       5 |       6 |       7 |  TOTAL
---------+----------+---------+---------+---------+---------+---------+---------+---------+
ABSENT   |      60  |       2 |      20 |      80 |     291 |      78 |     320 |    1025 |   1816
         |       .  |     0.3 |     4.8 |    14.7 |   -86.6 |    16.1 |    30.7 |    19.9 |
         |       .  |    0.06 |    0.62 |    2.48 |    9.02 |    2.42 |    9.92 |   31.76 |  56.28
         |       .  |    0.11 |    1.10 |    4.41 |   16.02 |    4.30 |   17.62 |   56.44 |
         |       .  |   66.67 |   74.07 |   68.97 |   43.37 |   70.91 |   62.26 |   57.39 |
---------+----------+---------+---------+---------+---------+---------+---------+---------+
PRESENT  |      40  |       1 |       7 |      36 |     380 |      32 |     194 |     761 |   1411
         |       .  |    -0.3 |    -4.8 |   -14.7 |    86.6 |   -16.1 |   -30.7 |   -19.9 |
         |       .  |    0.03 |    0.22 |    1.12 |   11.78 |    0.99 |    6.01 |   23.58 |  43.72
         |       .  |    0.07 |    0.50 |    2.55 |   26.93 |    2.27 |   13.75 |   53.93 |
         |       .  |   33.33 |   25.93 |   31.03 |   56.63 |   29.09 |   37.74 |   42.61 |
---------+----------+---------+---------+---------+---------+---------+---------+---------+
TOTAL            .          3        27       116       671       110       514      1786     3227
                 .       0.09      0.84      3.59     20.79      3.41     15.93     55.35   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    74.580   DF=   6  PROB=0.0001
PHI                            0.152
CONTINGENCY COEFFICIENT        0.150
CRAMER'S V                     0.152
LIKELIHOOD RATIO CHISQUARE    75.069   DF=   6  PROB=0.0001
```

Physician Visits for Administration

```
SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1986  369
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3N0_PSY BY CMYSPT48

S3N0_PSY     CMYSPT48

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|        1|        2|        3|        4|        5|        6|        7|  TOTAL
---------+--------+---------+---------+---------+---------+---------+---------+---------+
ABSENT   |    1467|        4|        7|       62|       81|       43|      208|       24|    429
         |       .|      1.3|      2.3|     11.2|     20.0|      2.3|    -38.0|      1.0|
         |       .|     0.63|     1.11|     9.79|    12.80|     6.79|    32.86|     3.79|  67.77
         |       .|     0.93|     1.63|    14.45|    18.88|    10.02|    48.48|     5.59|
         |       .|   100.00|   100.00|    82.67|    90.00|    71.67|    57.30|    70.59|
---------+--------+---------+---------+---------+---------+---------+---------+---------+
PRESENT  |    1247|        0|        0|       13|        9|       17|      155|       10|    204
         |       .|     -1.3|     -2.3|    -11.2|    -20.0|     -2.3|     38.0|     -1.0|
         |       .|     0.00|     0.00|     2.05|     1.42|     2.69|    24.49|     1.58|  32.23
         |       .|     0.00|     0.00|     6.37|     4.41|     8.33|    75.98|     4.90|
         |       .|     0.00|     0.00|    17.33|    10.00|    28.33|    42.70|    29.41|
---------+--------+---------+---------+---------+---------+---------+---------+---------+
TOTAL            .         4         7        75        90        60       363        34      633
                 .      0.63      1.11     11.85     14.22      9.48     57.35      5.37   100.00

STATISTICS FOR 2-WAY TABLES

WARNING: OVER 20% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5.
         TABLE IS SO SPARSE THAT CHI-SQUARE MAY NOT BE A VALID TEST.

CHI-SQUARE                    51.973   DF=   6  PROB=0.0001
PHI                            0.287
CONTINGENCY COEFFICIENT        0.275
CRAMER'S V                     0.287
LIKELIHOOD RATIO CHISQUARE    59.906   DF=   6  PROB=0.0001
```

Community and Informal Supports

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SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  370
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY HOUSPT49

S3NO_PSY .    HOUSPT49

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|      1|      2|      3|      4|      5|  TOTAL
---------+--------+-------+-------+-------+-------+-------+
ABSENT   |    1469|     84|     58|     42|    219|     24|    427
         |       .|   18.8|   11.8|   10.1|  -41.7|    0.9|
         |       .|  13.35|   9.22|   6.68|  34.82|   3.82|  67.89
         |       .|  19.67|  13.58|   9.84|  51.29|   5.62|
         |       .|  87.50|  85.29|  89.36|  57.03|  70.59|
---------+--------+-------+-------+-------+-------+-------+
PRESENT  |    1249|     12|     10|      5|    165|     10|    202
         |       .|  -18.8|  -11.8|  -10.1|   41.7|   -0.9|
         |       .|   1.91|   1.59|   0.79|  26.23|   1.59|  32.11
         |       .|   5.94|   4.95|   2.48|  81.68|   4.95|
         |       .|  12.50|  14.71|  10.64|  42.97|  29.41|
---------+--------+-------+-------+-------+-------+-------+
TOTAL            .      96      68      47     384      34     629
                 .   15.26   10.81    7.47   61.05    5.41  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                    57.203   DF=   4  PROB=0.0001
PHI                            0.302
CONTINGENCY COEFFICIENT        0.289
CRAMER'S V                     0.302
LIKELIHOOD RATIO CHISQUARE    62.786   DF=   4  PROB=0.0001
```

Community
Housing

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SAS                                                                          14:02 TUESDAY, DECEMBER 24, 1985  371
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY INSPT50

S3NO_PSY     INSPT50

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|      1|      2|      3|      4|  TOTAL
---------+--------+-------+-------+-------+-------+
ABSENT   |    1468|    186|    117|     88|     37|    428
         |       .|    6.3|   -1.7|   -4.2|   -0.3|
         |       .|  29.48|  18.54|  13.95|   5.86|  67.83
         |       .|  43.46|  27.34|  20.56|   8.64|
         |       .|  70.19|  66.86|  64.71|  67.27|
---------+--------+-------+-------+-------+-------+
PRESENT  |    1248|     79|     58|     48|     18|    203
         |       .|   -6.3|    1.7|    4.2|    0.3|
         |       .|  12.52|   9.19|   7.61|   2.85|  32.17
         |       .|  38.92|  28.57|  23.65|   8.87|
         |       .|  29.81|  33.14|  35.29|  32.73|
---------+--------+-------+-------+-------+-------+
TOTAL            .     265     175     136      55     631
                 .   42.00   27.73   21.55    8.72  100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     1.388   DF=   3  PROB=0.7131
PHI                            0.047
CONTINGENCY COEFFICIENT        0.047
CRAMER'S V                     0.047
LIKELIHOOD RATIO CHISQUARE     1.387   DF=   3  PROB=0.7134
```

Informal
Supports

```
SAS                                                                               14:02 TUESDAY, DECEMBER 24, 1985  372
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY PIMPNTS1

S3NO_PSY     PIMPNTS1

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       .|       1|       2|       3|       4|       5|       6|       7|       8|       9|      10|  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |    1478|      74|     149|      55|      49|      21|      22|      31|       9|       7|       1|    418
         |       .|    -4.6|     3.8|   -21.6|    12.7|     3.5|     4.5|    -2.6|     3.0|     1.0|     0.3|
         |       .|   11.90|   23.95|    8.84|    7.88|    3.38|    3.54|    4.98|    1.45|    1.13|    0.16|  67.20
         |       .|   17.70|   35.65|   13.16|   11.72|    5.02|    5.26|    7.42|    2.15|    1.67|    0.24|
         |       .|   63.25|   68.98|   48.25|   90.74|   80.77|   84.62|   62.00|  100.00|   77.78|  100.00|
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |    1247|      43|      67|      59|       5|       5|       4|      19|       0|       2|       0|    204
         |       .|     4.6|    -3.8|    21.6|   -12.7|    -3.5|    -4.5|     2.6|    -3.0|    -1.0|    -0.3|
         |       .|    6.91|   10.77|    9.49|    0.80|    0.80|    0.64|    3.05|    0.00|    0.32|    0.00|  32.80
         |       .|   21.08|   32.84|   28.92|    2.45|    2.45|    1.96|    9.31|    0.00|    0.98|    0.00|
         |       .|   36.75|   31.02|   51.75|    9.26|   19.23|   15.38|   38.00|    0.00|   22.22|    0.00|
---------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL           .      117      216      114       54       26       26       50        9        9        1      622
                .    18.81    34.73    18.33     8.68     4.18     4.18     8.04     1.45     1.45     0.16   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                       45.001   DF=   9  PROB=0.0001
PHI                               0.269
CONTINGENCY COEFFICIENT           0.260
CRAMER'S V                        0.269
LIKELIHOOD RATIO CHISQUARE       50.786   DF=   9  PROB=0.0001
```

Impediment to Discharge

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SAS                                                                     14:02 TUESDAY, DECEMBER 24, 1985  373
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3NO_PSY BY RUG

S3NO_PSY     RUG

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |SPEC A  |SPEC B  |REHAB A |REHAB B |COMP A  |COMP B  |COMP C  |COMP D  |  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      34|      49|      63|      87|     121|     144|      40|       4|   1896
         |     6.2|   -58.6|    24.5|    17.9|    46.8|    19.4|   -50.1|   -15.3|
         |    1.02|    1.46|    1.88|   ·2.60|    3.62|    4.30|    1.20|    0.12|  56.65
         |    1.79|    2.58|    3.32|    4.59|    6.38|    7.59|    2.11|    0.21|
         |   69.39|   25.79|   92.65|   71.31|   92.37|   65.45|   25.16|   11.76|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      15|     141|       5|      35|      10|      76|     119|      30|   1451
         |    -6.2|    58.6|   -24.5|   -17.9|   -46.8|   -19.4|    50.1|    15.3|
         |    0.45|    4.21|    0.15|    1.05|    0.30|    2.27|    3.56|    0.90|  43.35
         |    1.03|    9.72|    0.34|    2.41|    0.69|    5.24|    8.20|    2.07|
         |   30.61|   74.21|    7.35|   28.69|    7.63|   34.55|   74.84|   88.24|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL          49      190       68      122      131      220      159       34     3347
             1.46     5.68     2.03     3.65     3.91     6.57     4.75     1.02   100.00
(CONTINUED)

TABLE OF S3NO_PSY BY RUG

S3NO_PSY     RUG

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |MENTAL A|MENTAL B|MENTAL C|PHYS A  |PHYS B  |PHYS C  |PHYS D  |PHYS E  |  TOTAL
---------+--------+--------+--------+--------+--------+--------+--------+--------+
ABSENT   |      77|      72|       9|     805|      68|     293|      25|       5|   1896
         |    15.8|   -78.1|   -61.8|   313.9|    10.2|   -76.9|   -92.8|   -21.1|
         |    2.30|    2.15|    0.27|   24.05|    2.03|    8.75|    0.75|    0.15|  56.65
         |    4.06|    3.80|    0.47|   42.46|    3.59|   15.45|    1.32|    0.26|
         |   71.30|   27.17|    7.20|   92.85|   66.67|   44.87|   12.02|   10.87|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
PRESENT  |      31|     193|     116|      62|      34|     360|     183|      41|   1451
         |   -15.8|    78.1|    61.8|  -313.9|   -10.2|    76.9|    92.8|    21.1|
         |    0.93|    5.77|    3.47|    1.85|    1.02|   10.76|    5.47|    1.22|  43.35
         |    2.14|   13.30|    7.99|    4.27|    2.34|   24.81|   12.61|    2.83|
         |   28.70|   72.83|   92.80|    7.15|   33.33|   55.13|   87.98|   89.13|
---------+--------+--------+--------+--------+--------+--------+--------+--------+
TOTAL         108      265      125      867      102      653      208       46     3347
             3.23     7.92     3.73    25.90     3.05    19.51     6.21     1.37   100.00
```

RUG
Classification.

Rensselaer Polytechnic Institute

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SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     1229.900    DF=  15  PROB=0.0001
PHI                               0.606
CONTINGENCY COEFFICIENT           0.518
CRAMER'S V                        0.606
LIKELIHOOD RATIO CHISQUARE     1309.564    DF=  15  PROB=0.0001
```

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SAS
CROSSTABS AND CHI-SQUARE OF DIAGNOSIS AND SYMPTOM GROUPS
WITH PAI VARIABLES

TABLE OF S3HB_PSY BY ADLSUM

S3HB_PSY     ADLSUM

FREQUENCY|
DEVIATION|
 PERCENT |
 ROW PCT |
 COL PCT |       3 |       4 |       5 |       6 |       7 |       8 |       9 |      10 |  TOTAL
---------+---------+---------+---------+---------+---------+---------+---------+---------+
ABSENT   |    1045 |     120 |     279 |     233 |     109 |      81 |      28 |       1 |   1896
         |   391.9 |    18.6 |    25.2 |   -33.8 |  -113.6 |  -193.2 |   -91.0 |    -4.1 |
         |   31.22 |    3.59 |    8.34 |    6.96 |    3.26 |    2.42 |    0.84 |    0.03 |  56.65
         |   55.12 |    6.33 |   14.72 |   12.29 |    5.75 |    4.27 |    1.48 |    0.05 |
         |   90.63 |   67.04 |   62.28 |   49.47 |   27.74 |   16.74 |   13.33 |   11.11 |
---------+---------+---------+---------+---------+---------+---------+---------+---------+
PRESENT  |     108 |      59 |     169 |     238 |     284 |     403 |     182 |       8 |   1451
         |  -391.9 |   -18.6 |   -25.2 |    33.8 |   113.6 |   193.2 |    91.0 |     4.1 |
         |    3.23 |    1.76 |    5.05 |    7.11 |    8.49 |   12.04 |    5.44 |    0.24 |  43.35
         |    7.44 |    4.07 |   11.65 |   16.40 |   19.57 |   27.77 |   12.54 |    0.55 |
         |    9.37 |   32.96 |   37.72 |   50.53 |   72.26 |   83.26 |   86.67 |   88.89 |
---------+---------+---------+---------+---------+---------+---------+---------+---------+
TOTAL       1153       179       448       471       393       484       210         9     3347
           34.45      5.35     13.39     14.07     11.74     14.46      6.27      0.27   100.00

STATISTICS FOR 2-WAY TABLES

CHI-SQUARE                     1181.583    DF=   7  PROB=0.0001
PHI                               0.594
CONTINGENCY COEFFICIENT           0.511
CRAMER'S V                        0.594
LIKELIHOOD RATIO CHISQUARE     1317.447    DF=   7  PROB=0.0001
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ADL Sum

Higher ADL Score by Demented.

3601 July 1986

Analysis of Data Bases for Health Services Research on Dementia

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Project Report

I

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APPENDIX A

I. INTRODUCTION

An estimated 5 percent of the population over age 65 suffer from one or more of forms of dementia. The prevalence of dementia has been shown by epidemiological studies to increase exponentially with age (Cross and Gurland, 1985). In light of the rapid aging of the U.S. population, dementia is expected to become an increasingly greater health problem that must be addressed by society as well as by family and friends. The amount and types of care, and the costs of care, required for people with dementia are health service research questions that require considerably more investigation. We currently have wide-ranging estimates of the prevalence of the disease, very limited information on the resources that are required for care, and virtually no information on what combinations and amounts of services constitute model care packages for dementia patients at different stages of the disease.

A central problem in conducting health services research on dementia among the elderly is the difficulty of diagnosing the presence and, if present, the stage of the disease (Maslow, 1985). Hence, analysis of current utilization of health services for dementia patients is confounded by the possibilities of misdiagnosis and by additional complications resulting from the presence of comorbidities and disabilities. To identify the specific service needs and costs of dementia patients, it is essential, therefore, to clearly distinguish the dementia patients from nondementia patients. Subsequently, answers can be sought for questions such as whether dementia patients require special services, the extent to which better outcomes could be achieved with the special services and whether additional costs would be incurred to provide such services.

Many sources of information on the health characteristics and service use of the elderly population have not employed special diagnostic tests to detect the presence and extent of cognitive impairments. Cognitive impairment can be measured by formal psychological tests that offer the advantages of standardized procedure, quantification and cumulative knowledge based on experience. Their disadvantages, however, include being lengthy, and requiring repeated testing (Folstein, 1985). Concomitant with the development of such formal tests, other tests called clinical aids have been developed which are brief and have high face validity and interpretability. These clinical aids include the Mini-Mental State Examination (MMSE) and the Short Portable Mental Status Questionnaire (SPMSQ). The clinical aids have been the strategy of choice for population surveys when measures of cognitive impairment were desired.

Apart from special studies, relatively few sources have included specific instruments to measure cognitive impairment. In some cases where instruments were included, the instruments were not even administered to those who were most likely to be cognitively impaired. Hence, while we can be confident that dementia patients constitute some part of the sample of surveys and program participants, in many data sources their identity can only be inferred by analysis of health characteristics that are proxies or covariates of a diagnosis of dementia. These characteristics include, for example, a diagnosis of senility, inappropriate behavior, mood and orientation impairments, functional disabilities, and excessive caregiver burdens.

To explore the feasibility of employing extant data sources for health services research on dementia patients, we examined the data items collected from numerous national surveys, special studies, and program projects to determine the extent to which dementia patients can be identified and their resource use measured. This report reviews general types of data sources that may be useful for health services research on dementia. While we list and describe many specific data sources, our goal is not to provide a comprehensive inventory but to highlight the representative types of data sources that would be useful. The remainder of this report will discuss: (a) general sources of available information, their scope and sponsorship, (b) specific sources of data and characteristics of the data collected and features of the data collection process that affect the study of dementia patients, (c) illustrations and applications of these data sources for health services research, and (d) the feasibility of enhancing future data collection projects to provide better information on health services requirements of dementia patients.

II. SOURCES OF DATA

A source of data to study the resource requirements of people with dementia would ideally contain thorough diagnostic information that would include well validated tests of cognitive impairment. Moreover, it would contain information on the mood and orientation of patients, behavioral patterns, functional disability and medical and psychosocial histories. Further, the data source should be longitudinal so that the course of the disease could be tracked, since decline over time is a necessary condition of dementia. Finally, the source of information would have data on the resources used by the subjects from both informal (family and friends) and formal sources. Unfortunately, as with the study of long-term care in general, the desired properties of a data source to study dementia are too demanding to obtain in most circumstances.

Existing sources of data on the health and resource use of elderly Americans are generally imperfect for the study of dementia, but they provide a basis for retrospective analysis that can further our understanding of differences between demented and nondemented patients in terms of their health services requirements. These sources can be classified in general as (a) national and area surveys, (b) special studies, and (c) program records. Across these types of data sources, a distinction can be made between nursing home and community based populations. This distinction is important in the study of dementia because it has been estimated that approximately half of the patients in nursing homes suffer from dementia (Cross and Gurland, 1985). The high institutionalization rate is the result, in part, of excessive caregiving burden of families with the progression of the disease. While most extant data sources are useful to study dementia in either the community homes or in nursing homes, there are few sources that encompass both settings.

Perhaps the most difficult problem with the use of the extant sources for health services research is making the distinction between patients who are demented and those who are not. Many do not employ the mental status tests for cognitive impairment (e.g., MMSE, SPMSQ), but do collect data on characteristics that are known to be correlates of dementia. These include certain diagnoses and conditions, collected either as an open-ended listing of primary and any secondary diagnoses or conditions, or as a check-list of diagnoses and conditions. Many sources also contain information on functional disabilities measured in terms of limitations in activities of daily living (ADL, e.g., bathing, dressing, eating) and instrumental activities of daily living (IADL, e.g., shopping, managing money). Vision, hearing and speech impairments are also frequently noted, as are behavior, mood and orientation. Finally, a few sources of information contain information on the emotional, economic and time burden of caregivers for disabled elderly individuals.

Although it is apparent that many sources of data contain enough characteristics of disabled elderly patients to partially distinguish demented from nondemented patients in a population, further limitations in the quality of the data are frequently encountered as a result of the procedures behind the collection of data or the inaccuracy of recording information because of administrative or financial incentives. For example, while a test of cognitive impairment may be an integral part of a national survey, it may not be administered to a sample respondent who has a proxy. Second, administrative records on which program eligibility or reimbursement for care are based may be subject to artifacts in patient assessment resulting from the incentives inherent in the system.

In this section, we describe representative data sources that focus on the elderly population, and identify their sponsorship and their goals. We also describe in general terms the types of data available for the study of dementia. We selected the specific sources, listed in Table 1, on the basis of the depth of information possibly useful to distinguish dementia from nondementia patients, including the possibilities of tracking people over time to assess decline in cognitive or physical function. Table 1 presents the data sources, grouped generally by whether the respondents are in communities or in nursing homes. Detailed descriptions of these data sources are presented in Appendix A.

Table 1. Sources of Data on Dementia and Health Services

Community Based Sources

A. 1982-84 Long-Term Care Survey

B. Health Interview Survey--1984 Supplement on Aging (SOA)

C. Establishment of Populations for Epidemiologic Studies of the Elderly (EPESE)

D. 1975-76 GAO Cleveland Study

E. 1981-82 Long-Term Care Channeling Demonstration

F. Other community-based long-term care demonstration projects

G. California Medicaid Section 2176 Waiver

Nursing Home Based Sources

H. 1977 and 1985 National Nursing Home Surveys

I. 1981 San Diego Nursing Home Study

J. Medicaid Nursing Home Reimbursement Systems

K. Patient Assessment Computerized

Community and Nursing Home Based Sources

L. Epidemiological Catchment Area (ECA) Program

M. Medicaid Tape-to-Tape

A. Community-based Sources

Community-based sources of information for health services research on demented patients include national surveys, area surveys, special studies and program data. Important sources of information for the health services research study of the demented patients are two national surveys of the general elderly population, the 1982 and 1984 Long-Term Care Survey (LTC) and the Supplement on Aging (SOA) of the 1984 Health Interview Study and its follow-up of the sample.

The 1982 Long-Term Care Survey was conducted by the Census Bureau for the Department of Health and Human Services, and was targeted to the disabled elderly, since only elderly Medicare beneficiaries who had chronic conditions lasting or expected to last three months were included in the main survey. This survey also included an SPMSQ and a survey of caregiver burdens. The 1984 Long-Term Care Survey was designed to identify changes in the sample of the 1982 survey in the intervening two years and to provide profiles of the disabled elderly population in 1984.

The Supplement on Aging (SOA) of the 1984 Health Interview Survey (HIS) sponsored by the National Center for Health Statistics (NCHS) provides extensive information on the health characteristics of the elderly population and their formal and informal service use. Information from the SOA will be linked to information from the HIS and a 1986 follow-up to measure changes in disability and institutionalization, and mortality. To date, only the 1986 follow-up is planned for the SOA, but future year follow-ups are possible. This project is called the Longitudinal Study on Aging (LSOA).

Table 1 also lists special studies of the elderly population that are potentially important sources of information for the study of dementia among the elderly.

The National Institute on Aging (NIA) developed a project titled The Establishment of Populations for Epidemiologic Studies of the Elderly (EPESE) which consists of four prospective studies of community based elderly populations in East Boston, Massachusetts; Iowa and Washington Counties, Iowa; New Haven, Connecticut; and Durham, North Carolina (Coroni-Huntley, et al., 1985). The studies have common design and methodology and unique investigator initiated components. The studies at all sites were designed to follow cohorts of elderly individuals over a five-year period to identify predictors of mortality, hospitalization and placement in long term care facilities, as well as to study risk factors for chronic diseases and disability.

The 1975 Cleveland study was conducted by the U.S. General Accounting Office to characterize the well being of older people, to describe the help they receive from others and to explore issues relating to the many programs designed to help them (GAO, 1977). With a one year follow-up of the sample, the second phase of the study was intended to study changes in well-being over a one-year period and the factors influencing those changes. The study employed the OARS assessment instrument developed by Duke University to measure the health status of older people. In addition, information on Federal State and local agencies serving older persons in Cleveland was incorporated in the study.

It is important to note that the OARS instrument, the basic instrument for characterizing the well-being of the elderly in Cleveland, has been employed in other community studies of the elderly in Arkansas, Portland, Oregon, Appalachia (Kentucky) and in Hawaii, as well as in Durham, North Carolina by Duke University. The OARS instrument is also being used by the Benjamin Rose Institute (in Cleveland) as part of a broader assessment strategy of their elderly care clients.

The Long-Term Care Channeling Demonstration Project was designed to determine if case management affected the health and use of services of frail elderly. In order to evaluate the effects of this specific program, considerable information was collected on disabled elderly persons and the services they used. These included both the administration of a SPMSQ and a survey of caregivers of the elderly.

The Long-Term Care Channeling Demonstration Project is the most recent and extensive of a series of community-based studies on the use of services by disabled elderly. These demonstration projects were designed generally to test the acceptability of various types of community-based services and the potential for reducing the risk of nursing home admission. Because of the experimental nature of these studies, they collected detailed patient level data on clients, most of whom were at high risk of entering nursing homes (Hamm, et al., 1983).

The final community-based data source listed in Table 1 is the Medicaid Section 2176 waiver project in California. This project represents one of many "2176" projects in which the specific requirements for services covered under Medicaid were waived to permit the provision of non-medical services to frail elderly in the community, with the goal of diverting such individuals from nursing homes (State of California, 1983). The California project is listed because it is representative of the 2176 projects and also because it administered an SPMSQ in the process of characterizing the health service needs of the patients in the project.

B. Nursing Home Sources

Sources of data for studying dementia patients in nursing homes include national nursing homes surveys, special studies of the nursing home population and programmatic data on nursing home patients.

NCHS periodically conducts nationally representative surveys of residents of nursing homes. The last survey for which data are currently available was conducted in 1977 and included samples of current and discharged residents. The current National Nursing Home Survey (NNHS), 1985-86, has recently completed field work and data will become available in 1987. While the pre-test of the 1985-86 NNHS included a special study of patients for mental health problems, response rate problems for this component of the survey forced its cancellation from the national survey. However, the pre-test, which was sponsored by the National Institute for Mental Health (NIMH), provides highly pertinent information for the study of dementia.

The San Diego Incentive Reimbursement Study sponsored by the National Center for Health Services Research (NCHSR) was designed to determine if casemix based payment for nursing home care would affect who nursing homes admitted, and the discharge pattern and outcomes of nursing home patients (Meiners, et al., 1985). In order to develop the reimbursement incentives, time and motion and work sampling studies were conducted on Medicaid patients in the nursing homes. The availability of detailed casemix and resource use data on nursing home patients along with the longitudinal follow-up of patients (for 18 months) suggests that this source of information would be useful for studying dementia patients.

A third group of data sources for the study of dementia patients in nursing homes is the state Medicaid management information systems for the reimbursement of nursing homes. Particularly useful are the Medicaid reimbursement data from states that have initiated a casemix adjusted system, because of the availability of data on patient characteristics. While differences are found in the types of information recorded across states, they typically include longitudinal data on diagnosis, functional disability, behavioral problems and special service use. In addition, a few states (New York, Texas, Ohio and Maryland) conducted resource consumption (i.e., staff time) studies in the development of the casemix classification systems.

The final nursing home based data sources is Patient Assessment Computerized, a management information system operated by the National Health Corporation (NHC). This system contains patient specific information from NHC nursing homes as well as from others that subscribe to their information service. The data system contains extensive information on patient characteristics including diagnosis, functional disability, behavioral problems, mood and orientation status, and the information is longitudinal with patient assessment information available at 3 month intervals.

C. Source of Data on Both the Nursing Home and Community Population

Relatively few sources of data include information on both the institutional and the community-based elderly populations, with information for the study of dementia patients. The most detailed source of information to study dementia in the total community is the Epidemiological Catchment Area (ECA) Program sponsored by NIMH.

The ECA Program is the most elaborate study of psychiatric epidemiology in the United States. The program was initiated in late 1978 with funding for the first of 5 study sites. Overall goals of the program are to provide information on (1) prevalence of specific mental disorders in the total population of community and institutionalized residents, (2) longitudinal course of specific mental disorders in terms of incidence, recurrence, and remission, and (3) use of mental health and general medical and other human services. Across the five study sites, approximately 20,000 people were studied for mental disorders. The ECA program results will provide the best general community estimates of the prevalence of specific disorders and use of the mental health services available.

Another source of information with both community and nursing home populations are the five states in the Health Care Financing Administration (HCFA) sponsored Medicaid information systems, referred to as the Tape-to-Tape projects. These states are New York, California, Michigan, Tennessee and Georgia. The Tape-to-Tape data system contains longitudinal information on Medicaid patients in these states but relatively little information, other than diagnosis, on the health status of the recipients.

D. Overview of Strengths and Weaknesses

Many of the sources discussed above are limited in the amount and sensitivity of items to identify cognitive impairment. For example, while the special studies contain a validated test such as the SPMSQ, other data sources, notably the Medicaid nursing home reimbursement information systems, do not include these types of tests. The only source of data on nursing home patients that contains a test of memory loss is the San Diego Incentive Reimbursement Study. Hence, it appears to be a good source to test the relationships between cognitive impairment scores and other variables associated with dementia.

In some of the studies (e.g., SOA), a specific memory loss test is used, but this instrument was employed almost invariably at baseline so that declines in cognitive impairment could not be detected. In other cases (e.g., LTC, Channeling), the way in which proxy respondents were chosen resulted in the omission of the administration of the test of cognitive impairment to some sample respondents who were likely to be impaired. The application of the OARS instrument in the Cleveland Study, on the other hand, makes this data source particularly useful for the study of dementia patients. In the application of OARS, the cognitive impairment test is employed as a preliminary screening instrument, and individuals who have 40 percent errors are screened from factual questions but are still required to answer attitude questions.

Another limitation found in some studies, particularly those that are associated with the administration of specific programs (e.g., Medicaid nursing home reimbursement or Medicaid 2176 waivers), is the possibility that assessments of patients' conditions may be subject to artifacts of the programs. For example, restrictions on the provision of care to mental health patients under certain programs might result in the omission of diagnoses of dementia. This type of situation might also be found in Medicaid 2176 waiver programs if the programs are directed towards specific physical disabilities. Beyond the potential problems of misdiagnosis of dementia, other patient characteristics that might be helpful for corroborating the presence of dementia (e.g., ADL changes) might be subject to artifacts of reimbursement programs if differential payments are made on the basis of such (ADL) changes.

Beyond the direct tests of cognitive impairment, most of the data sources discussed tend to have a considerable amount of information that can be employed to partially corroborate the presence of dementia and to relate expected dementia patients with resources used. These include subjective assessments of mental health as well as physical health conditions that are frequently correlates of dementia. With regard to resources used, most of the community-based studies elicited information on formal sources of services used (e.g., physician, hospital, home health) and asked about informal care given for problems associated with physical and mental impairments. In a few studies (e.g., Channeling, LTC), separate surveys were conducted to determine the extent of emotional, physical, and economic burdens experienced by caregivers. For the nursing home samples, data are available on the services received, and in some cases (e.g., casemix reimbursement studies), the amounts of nursing and other service times per day received by patients.

III. ILLUSTRATIONS AND APPLICATIONS

Given the recency of the public focus on Alzheimer's and related diseases leading to dementia, there has been relatively little use of the data bases discussed in the prior section for the analysis of the health services and costs of dementia patients. The information contained in those data bases appear to hold substantial potential for addressing major questions such as the following:

1. What types and amounts of care are dementia patients receiving by formal and informal providers of care?
2. What are the determinants of the settings where services are provided (nursing home vs. community)? What are the causes of access problems to different types of services?
3. What are the costs of services in different settings?
4. Do different models of care within a setting (e.g., nursing home) and amount of resources result in different outcomes or other quality of care levels?
5. How different are the resource requirements of dementia patients and other patients in the various settings in which care is provided?

As with health services research in general, there is no single data base that meets the requirements for the analysis of all possible issues. This is particularly the case where the disease of interest is a long-term care problem with expected durations ranging from 3 to 30 years, and where care is frequently provided in multiple sites (e.g., in the community and in institutions), for the same person. However, the breadth and depth of the information collected across the data sources we reviewed suggest that a substantial understanding of health services questions, such as those listed above, could be acquired by analysis of the different extant data sets. In the following, we present some existing findings and illustrations of further analyses that can be conducted with specific data sets.

A. Community-Based Population

The highly refined design of the NIMH-ECA studies and the NIA-EPESE studies suggest that analyses of these data sources will provide important results on the characteristics of elderly Americans with dementia and their health care utilization. In an initial analysis of the Baltimore ECA data, for example, German and her colleagues (1985) found that a small proportion of those with cognitive impairments are receiving care from any type of provider and that care is frequently obtained in the form of discussion of emotional problems during the course of general medical care. They also found no instances of specialty mental health care for older individuals with cognitive impairment. Because of the recency of the NIA-EPESE and the NIMH-ECA, considerably more information on health services use and costs can be expected from those studies.

Another source of information that has been employed for analysis of dementia patients in the community is the GAO Cleveland study. For example, similar to German's results, Laurie (1980) found that the cognitively impaired population had low use rates of mental health services; 64 percent received neither mental health services nor psychotropic drugs. Laurie's analysis also showed the relationship between memory loss and need for assistance in daily living activities. He found that the four most frequent activities of daily living that some older people are not able to perform when they have severe memory problems are (1) shopping, (2) doing housework, (3) preparing meals, and (4) handling money. Table 2 shows that 50 percent of those with severe memory problems could not do housework or shop even with some help, and approximately 40 percent could not handle money or prepare meals even with help.

Many of the other data sources on the community population are recent and have not been analyzed for the purpose of studying dementia patients and health services use and costs. The LSOA, the LTC surveys, and the Channeling Demonstration Project are all longitudinal in nature and contain considerable information on both the characteristics of the samples and their use of services. Based on available patient characteristics, dementia patients could be identified with some degree of certainty, and their health services use and costs could be measured; comparisons could be made among dementia patients, for example, by level of impairment, and between dementia patients and nondementia patients. As an illustration of an analysis strategy, the following discusses the use of data from the Channeling Demonstration.

The Long-Term Care Channeling Demonstration was designed, in part, to test the effectiveness of case management in the provision of community-based, long-term care of frail elderly (Kemper et al., 1985). Two models of channeling were employed in the project: one was a basic model in which only

Table 2. Activities of Daily Living and Mental Functioning: Cleveland GAO Study

	Activities Performed With Some Help When Having A Severe:		Activities Unable to Perform Even With Some Help When Having A Severe:	
Activities of Daily Living	Mental Health Functioning Problem	Memory Problem	Mental Health Functioning Problem	Memory Problem
Going places	41	67	6	6
Taking medicine	39	16	6	6
Doing housework	38	39	18	50
Shopping	29	28	22	50
Bathing	14	39	7	11
Handling money	16	33	10	39
Walking	14	28	4	0
Using phone	10	28	5	33
Preparing meals	12	22	13	44
Taking care of personal appearance	5	17	3	11
Dressing	3	11	5	11
Eating	3	6	1	6
Getting in and out of bed	6	6	3	6

Source: Laurie, 1980.

case management was offered; in the other, case management was enhanced with service payments. Approximately 25 percent of the sample of 6,000 people were subject to each of the Channeling models, while the remaining 50 percent were control groups not directly subject to either of the two Channeling interventions. The different samples in the Channeling project provide opportunities, for example, to examine differences between patient characteristics and costs under different service conditions. They provide a basis for examining the nature of variations in service use and costs of community-based dementia patients.

Information on baseline characteristics of the samples was extensive, and included basic demographic characteristics, financial resources, living arrangement, health and functioning, and utilization of health and social services. In addition, the SPMSQ was administered and questions were asked about respondent attitudes (e.g., global life satisfaction and sense of social isolation). Table 3 highlights the types of information collected and prevalence of characteristics for the case management and case management and service payment model samples (Phillips, et al., 1986).

Information on utilization and costs of formal services (e.g., hospitalization) following the baseline was collected from sample persons, Medicare and Medicaid administrative records, and where services were not paid for by Medicare and Medicaid, directly from the providers. For community-based providers (supportive housing, privately contracted individuals) not covered by Medicare and Medicaid, information is available on a 20 percent subsample of elderly members; details were collected on services provided, charges and payments. For institutional providers (nursing homes), data were collected for the total samples. In the case of deceased members of the sample, caregivers provided

Table 3. Baseline Characteristics of Channeling Sample

Characteristics	Case Management	Case Management and Service Payment
Age 85+	27%	30%
Male	28	29
Married	32	33
Black	22	24
Elementary school or less	62	58
Monthly income less than $500	55	52
No assets	59	55
Medicaid	21	24
Lives alone	35	39
Dependent in toileting	55	58
Dependent in eating	23	26
Incontinent	52	53
Dependent in shopping	95	96
Dependent in money management	70	70
Severe impairment on SPMSQ (0-5 correct out of 10)*	31	32
Mental functioning (e.g., insomnia, depression)	**	**
Chronic conditions	93	94
One or more informal caregivers	64	67
Use nutrition program	15	21
Use transportation aid	4	8
Use counseling for emotional problems	4	6
MD visit for chronic condition in past 2 months	92	68
Hospital admission in past 6 months	63	68
Nursing home admission in past 6 months	8	9
Low global life satisfaction	40	47
Often feels lonely	27	26

*The Short Portable Mental Status Questionnaire was administered only to sample persons; in cases where a proxy respondent was the sole source of information (about 25 percent), SPMSQ was not administered.

**Available in computer files but not in published tabulations.

similar information on all institutional and noninstitutional services received. Sample persons provided 1-week utilization records, which were compared with provider data to estimate 6-month use and costs.

Patients with dementia can be estimated by analysis of diagnoses of mental health problems, the SPMSQ, and other signs and symptoms of mental health problems (e.g., depression), as well as provider types that are associated with mental health care (e.g., counseling for emotional stress). Analyses can be conducted next to relate the utilization and costs of different types of services to the groups of mental health patients in the community. Service types could be classified as informal care, formal community-based services, hospital care, and nursing home care. Variations in costs can be examined while controlling for specific characteristics of patients. Hence, analysis could reveal the characteristics of particularly heavy care patients, for example, who would be considered cases of "adverse selection" for innovative reimbursement policies such as capitation payment plans (Cohen, et al., 1986). Moreover, the components of costs can be examined. For example, the extent to which hospital utilization affects total annual costs in the population and the conditions under which hospital costs are distinctly either high or low can be identified. Finally, the Channeling data permits an analysis of the amount of informal care that is available to determine the extent to which substitutions may exist between informal and formal care.

B. Nursing Home Population

Analyses of nursing home patients have generally addressed all patients and have not focused on dementia patients. Recent analyses of nursing home patients suggest that patients with severe behavioral disorders that may be associated with dementia may have access-to-nursing-home problems and cost more than other patients in nursing homes.

Gruenberg and Willemain (1982), for example, found that Medicaid patients with the longest waits in hospitals prior to placement in long-term care facilities were those who were incontinent and exhibited frequent behavioral problems (129 days vs. 37 days waiting for incontinent patients without behavioral problems). In the nursing home, a Minnesota study found that among patients who were dependent in activities of daily living (ADL), but not in need of special nursing services, those with the additional characteristics of having behavioral problems required 16 to 30 percent more staff time. A study of nursing homes in New York found that, on average, patients with dementia required 5.6 percent more nursing resources than their nondemented counterparts (Foley, 1985). A third study, which employed information from several data sources including the 1977 NNHS, estimated that dementia patients in nursing homes required 30 percent more resources than nondementia patients (Hu et al., 1986). This study also found that nursing home patients with severe cognitive impairment required almost three times as much time as demented patients with less cognitive impairment. Finally, an analysis of data from the 1985 NNHS pre-test indicated that patients with organic brain diseases, and those with other mental disorders, differed from non-mental health patients in terms of drugs and service use (Burns et al., 1985).

As noted in the previous section, with exception of the San Diego Incentive Reimbursement study, no nursing home data sources currently contain information on cognitive impairment based on a formal test (e.g., MMSE). At the same time, however, extensive information is available on characteristics of patients that can be employed to identify, on the basis of clinical signs and symptoms, nursing home patients who are probably demented.

A particularly promising source of data for studying the resource use of patients with dementia is the nursing home information system from states with casemix reimbursement systems. In addition to containing the extensive information on patient characteristics--necessary to operate the casemix payment adjustments—these data sources are also longitudinal, and can be employed to study the course of dementia patients over time, for example, in terms of declines in physical functioning and types of services (including drugs) used. As an illustration, the following discusses patient assessment studies from New York, which has recently implemented a casemix system, and from Texas, which is developing one.

Both the New York and Texas nursing home patient characteristics and work sampling studies were designed to provide a basis for paying nursing homes according to the relative resource use of their patients (State of New York, Department of Health, 1984; State of Texas, Department of Human Services, 1986). The New York study collected data on 52 nursing homes and 3,600 patients in those homes. The sample of homes was selected to represent the different types of facilities in the state (e.g., hospital-based, rural location), and ones that were deemed to meet quality of care standards (e.g., not having deficiencies in standards). The first Texas study collected data on 53 nursing homes and 2,000 patients in those homes. A second casemix and work sampling study is scheduled to be conducted this winter (1986); it will differ from the first study in that a test of cognitive impairment will be included. Like New York, Texas selected homes that met specific quality criteria and were representative of the facilities in the state. The casemix studies were conducted in conjunction with HCFA-supported demonstration projects to establish Medicaid prospective payment systems.

In both states, extensive patient information was collected, including diagnoses, limitations in activities of daily living, behavioral disorders, services received, demographic characteristics, and origin of admission. Nursing times were collected through work sampling methods and details are available about the amount of RN, LPN, and aide time received by each patient in the sample. Table 4 presents a partial listing of patient characteristics by percentage from the New York and first Texas data sets.

The data from New York and Texas can be employed to study several issues. For example, an analysis can be conducted to determine the effectiveness of recorded diagnoses of mental disorders in nursing homes. Analyses can be conducted also to determine the nature and strength of correlation between the clinical signs and symptoms and diagnosis of dementia. Further, comparisons of the patterns of recorded diagnosis and clinical signs and symptoms between the New York and Texas samples can be made. In the case of the second Texas sample, it will also be possible to compare the scores of cognitive impairment tests with the other variables as well as the recorded diagnosis. Finally, differences among patients with dementia, and between them and nondementia patients, can be compared in terms of professional and nonprofessional nursing times, the use of special devices, drugs, and hospitalization.

C. Nursing Home Admissions

Admission to a nursing home is a critical decision for disabled elderly persons and their families. At the same time, the high public costs of nursing home care have caused policy makers to consider under what circumstances disabled elderly enter nursing homes and whether alternative care may be suitable. In spite of the personal and policy importance of nursing home

Table 4. Percentages of Nursing Home Patients by Characteristic

Characteristic	New York	Texas
Over 85	50%	46%
Female	78	76
Married	15	15
Payment source private	17	25
Admission origin hospital	53	35
Primary admission reason mental	22	—
Primary and secondary diagnoses of organic brain disease	40	30
Alcohol and drug abuse	*	—
Some vision impairment	75	31
Some hearing impairment	55	29
Some communication impairment	45	—
Decubitus	11	12
Dependent in transfer	70	66
Bladder incontinent	60	60
No motivation due to organic causes	32	—
Wanders	9	5
Verbal abuse	32	—
Physical aggression	21	23
Unable mentally for self care	36	39
Regressive behavior	35	10
Withdrawn	32	—
Psychotherapy	2	24
Physical therapy	19	8
Medications: psychotropics	16	—
Frequent changes in drug dose	4	—
Cognitive impairment scale	—	**

*Information collected, but not currently available in printed documents.

**Planned for 1986.

admissions, only limited information currently exists on the reasons why frail elderly Americans enter nursing homes and how factors such as mental and physical health status, financial resources, and informal caregiver resources affect use of community-based long-term care services, and subsequently, nursing home admission decisions.

Comparisons of the population of the institutionalized with the noninstitutionalized indicate that there are overlaps in the two groups in terms of levels of disability and sociodemographic characteristics. The nursing home population is relatively older, more physically disabled, and likely to be female and unmarried (Liu and Manton, 1985). Particularly relevant for the study of dementia patients, available evidence suggests that mental disorders and their possible consequences (e.g., incontinence) are highly important determinants of nursing home admission. To date, research has not been able to examine comprehensively the interrelationship of many factors that determine how long-term care requirements are met for disabled elderly residing in the community. Moreover, prior research has not been able to answer the question of how much of which factors distinguish individuals who enter nursing homes from those who do not enter nursing homes.

Several of the data sources discussed above appear to be very useful for identifying the effects of different determinants of nursing home admission for community based patients with dementia. The LTC Surveys, the LSOA and the Channeling Project are each longitudinal and contain large numbers of elderly patients; the LTC Surveys and the Channeling Project selected for frail elderly, who are particularly at risk of entering nursing homes. Hence, a measurable proportion of the samples of these studies would be expected to be nursing home admissions. The Channeling Project, for example, had a 6-

month nursing home admission rate of about 12 percent. These data sources also contain varying amounts of information known to be important predictors of nursing home admission: (a) sociodemographic characteristics, (b) health status, (c) informal community based care, and (d) financial resources (Branch and Jette, 1982, Spiker, 1982).

With these data sources, it would be possible to focus on the subgroup of people with mental health disorders, and determine how type and degree of mental impairment affect the risk of entering nursing homes, after controlling for other factors (e.g., availability of informal caregivers in the community). In addition, it is possible to analyze the incremental risk of entering nursing homes when physical disabilities are compounded by the presence of mental disorders. The results of such analyses will provide preliminary information for understanding the extent to which policy controllable factors (e.g., costs of care, types of service) are associated with the risk of nursing home admission. From the viewpoint of designing innovative reimbursement policies (e.g., capitation policies), for example, the relationship of community-based care and nursing home risks provides a basis for estimating the incremental costs of different coverage options for community-based care and the corresponding costs of nursing home use.

IV. FUTURE DATA COLLECTION

Future initiatives to collect data for the study of health service use and costs of dementia patients can benefit from current experience with extant data sources such as those discussed in this analysis. In the following we highlight some of the issues.

A major issue is the identification of dementia patients in survey samples and administrative records. For example, the use of clinical aids, such as tests of cognitive impairment (MMSE, SPMSQ) can be structurally planned for surveys so that all persons who are capable of responding alone or with the assistance of a proxy will be asked the questions. The use of the SPMSQ as a screener in the Cleveland GAO study, and the subsequent use of the responses to the screener, represents a good illustration of how to maximize the utility of the clinical aid. A second lesson is that dementia patients, because of their health status, may be overrepresentative of nonrespondents in survey samples. The experience of the Baltimore ECA project illustrates the important role of extensive follow-up to reduce the nonresponse rate of individuals with dementia, if a representative sample of such patients is required. These examples illustrate basic design features that can be incorporated in future surveys of the general population to maximize the value of the surveys for the study of dementia.

A second issue is the absence of results of memory tests for detecting cognitive impairment in nursing home patients. With the exception of special studies (e.g., San Diego), the cognitive impairments tests are not available to assist in the corroboration of the presence or degree of dementia among nursing home patients. The inclusion of such a test might be considered in future studies of casemix and resource consumption of nursing home patients, to measure the incremental costs of nursing home patients with dementia. Moreover, if the results are determined to be of significant value, such tests might be included in the ongoing patient assessment system for casemix payments. As we noted above, these data systems would be particularly attractive for the study of the course of dementia of nursing home patients because they are longitudinal and provide routinely collected data on resource consumption, changes in functional abilities and discharge patterns (e.g., to acute care hospitals). The potential drawback of this source of data is the fact that misassessments might occur as a result of incentives to maximize the severity of a given patient to maximize reimbursement. This is not necessarily a problem, since analytical and administrative measures can be taken to minimize the reimbursement artifacts. Moreover, any refinement of casemix measurement would enhance patient access and provider equity.

Since the extant data sources that we have discussed in this report have not been extensively analyzed to study dementia patients, it is clear that many lessons will be learned from future studies. A number of specific areas of research with such data sources might be pursued to both provide a better understanding of the health services use and cost of dementia patients, and the limitations of the extant data sources.

One area of focus should be the comparison of dementia patients in the community and those who enter nursing homes. The Long-Term Care Channeling Project, the LTC Surveys, LSOA, the ECAs and the EPESE studies provide an opportunity to track patients from the community to the nursing home, and to compare those who enter nursing homes and those who remain in the community. Comparisons can be made to determine the extent to which the severity of the dementia, the behavioral manifestations and the functional disabilities associated with the dementia and other health status measures determine institutional placement, in contrast to the amount and source of informal and formal health services provided. From the standpoint of future data collection, a key question will be the extent to which existing data can answer the questions about risk of nursing home admission. One issue may be the duration of follow-up that is required since some of the studies (e.g., LTC Surveys and the Channeling Project have limited periods of follow-up). Other sources such as the LSOA, have the potential to be extended indefinitely, so early analysis would provide important indications of the value of extending the longitudinal scope of such surveys.

A second area of importance for future research is the analysis of the extent to which data sets that do not contain cognitive impairment tests can accurately identify dementia patients on the basis of other manifestations. Data sources that contain the clinical aids and other variables can be analyzed to determine the correlation between recorded diagnoses, behavior impairments, functional disability and other characteristics and their scores on the cognitive impairment tests. Laurie's finding that severe memory loss is associated with several activities of daily living is illustrative of the associations between such measures. A second illustration is Foley's study which, while not involving scores on cognitive impairment tests, found a high correlation between behavioral characteristics and recorded diagnoses of organic brain disease. In general, these types of confirmatory analyses would be useful for determining the utility of extant data sources for the identification of dementia patients and, therefore, the value of the data sources for studying the health services use and costs of dementia patients.

From our review, it is clear that much can be learned from analysis of extant data sources. Prior experience indicates that certain adjustments can be made in any planned data collection efforts that can maximize the utility of new data for the study of dementia patients. Other suggestions for future data collection will result from future analysis of extant data sources such as the ones described above.

V. CONCLUSION

The preceding review of data sources that may be useful for the study of dementia and health services use indicates that our understanding of this issue can be substantially enhanced through retrospective analysis of extant data sources. All of the data sources discussed are longitudinal in nature and, therefore, permit measurement of changes in health status. Some of the sources are nationally representative while others are special area studies, and considerable variation exists in the types and details of information available. Almost all of the listed sources contain information on physical disabilities and medical conditions, and a surprising number contain at least some assessment of the mental status of the subjects of the studies. All of the data sources are oriented toward the elderly population in the United States, so we would expect to find a relatively high prevalence of Alzheimer's and other diseases causing dementia in these data sources.

We have focused our discussion on the utility of the extant data sources. Many other health services research issues associated with the care of dementia patients are not addressable with these data sources, and would require special studies. For example, the data sources listed would not provide information to analyze in detail the relationship and interactions between informal caregivers and the formal provider systems in the community, or the structural characteristics of nursing homes (e.g., amount of room for wandering) and the quality of recreational activities that result in optimal patient outcomes. Other studies are required to collect information on such aspects of health services for dementia patients.

In conclusion, there are numerous data sources available to study dementia patients and health care services used. With few exceptions, these data sources were not designed for the explicit purpose of studying dementia patients. However, the types of information that are available indicate that analysis of patterns of conditions present can distinguish individuals who are at high risk of being cognitively impaired. The health services used by these individuals can be measured in both the community and nursing home settings, and given the longitudinal nature of the information available, it may be possible to begin to specify service models and their costs.

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APPENDIX A

DETAILED INFORMATION ON DATA SOURCES

This appendix presents detailed information on the data sources listed in Table 1.

A. 1982-84 Long Term Care Survey

Two major surveys of elderly persons with functional limitations were conducted in 1982 and 1984. The structure of these two surveys was quite different so they are described separately below.

The 1982 Survey. The 1982 survey is a nationally representative survey of the Medicare population over age 65 needing assistance with one or more Activities of Daily Living (ADL) or Instrumental Activities of Daily Living (IADL) on a long-term basis. A sample of 36,000 Medicare eligibles was drawn and interviewed by telephone to identify those with assistance needs. Persons identified as requiring assistance with ADLs or IADLs for a period of three months or longer were interviewed personally in the second phase of the survey. Persons residing in institutions were excluded from the interviews, and no attempt was made to obtain information on deceased persons. The final sample size for the second phase was 6,400 persons. In addition to the interviews conducted with the persons requiring assistance, all informal caregivers providing care to those individuals were interviewed. Three surveys will thus be described here: the screening survey, the long term care survey (of which the screener is a part) and a survey of informal caregivers.

For all 36,000 sampled individuals, the screener asked age, race, sex and birth date. For each of nine ADL and seven IADL items, the person was asked if he or she had problems performing that activity and the duration of the difficulty. If the individual responded that the actual or expected duration had been or would be less than three months, he or she was not included in the survey.

The detailed portion of the long term care survey was administered to all noninstitutionalized persons with difficulty performing one or more ADL or IADL functions as indicated by the screener—about 6400 persons. The questionnaire was divided into seven categories: (1) functional status; (2) Other functioning; (3) Housing and Neighborhood Characteristics; (4) Health Insurance; (5) Medical Providers and Prescription Medicines; (6) Cognitive Functioning; and (7) Military Service, Ethnicity, Income and Assets.

The functional status questionnaire asked about the presence of seventeen medical conditions, and whether in the last twelve months any of twelve medical events had occurred (such as heart attack, stroke, broken hip, etc.). Included in this list was "senility," which was asked to proxy respondents. A series of detailed questions were asked with regard to each function included in the ADL scale: eating, transferring, walking, dressing, bathing, and toileting. For those respondents who did not receive either personal help or help from specialized equipment for any of the functions, there were questions concerning whether or not someone was standing by to render assistance if help was needed. A similarly detailed set of questions was included on ability to perform the instrumental activities of daily living. Those individuals reporting problems with ADLs or IADLs were asked how long health had prevented them from engaging in those activities and what condition caused the problem. The caregiver was identified by name. Individuals were also asked if they regularly visited a senior center or adult day care center, and if so, whether they received any health services or therapy at the center, whether they received transportation to the center, and whether they ate meals there or in some other place with a meal program.

A series of questions was also asked about the caregivers, including the identity of each, the number of days in the previous week that he or she provided assistance, and the duration of time that the person had been helping. It also asked the relationship of the caregiver to the elderly person, whether the person was paid to help, how much the elderly person would have to pay, and who or what insurance program (public or private) would pay for the care. The final segment of the functional status questionnaire asked about range of motion and impairment.

The "other functioning" section dealt mainly with emotional and mental status, social contacts, and activities. A series of questions addressed whether the person used doctors or counsellors for mental or emotional problems, whether they felt they needed such help, and whether they had ever been hospitalized for an emotional or mental problem. The elderly person was asked about frequency of contact with relatives and whether the frequency was adequate. A series of questions asked about television viewing, listening to a radio, presence of pets, attendance at religious services, reading habits, hobbies and games played. The respondent was asked to provide a general assessment of his or her overall satisfaction with life.

The brief section on health insurance asked whether the respondent was covered by Medicaid, CHAMPUS, other public assistance program, or private health insurance. Private plans were identified and described in terms of whether they provided coverage for hospitalization or other medical services.

The respondent was asked a series of questions concerning stays in a nursing home or hospital. He or she was also asked about any visits in the past month to a therapist, mental health professional, dentist, optometrist, chiropractor, or foot doctor. The number of prescription medicines bought in the last month and how much would be paid by the functionally impaired person out of pocket, whether another person or program would pay for the drugs, and whether the person was currently taking medication to relieve depression or as a tranquilizer were all included questions.

One brief section tested the cognitive function of the elderly individual using the SPMSQ. This test was not asked of persons for whom "senility" was noted in the earlier questions on medical condition. Income questions concerned receipt by any family member in the past month from various sources (e.g., Social Security or Railroad Retirement benefits, Supplemental Security Income, wages, salaries).

A survey of informal caregivers was administered to those still providing care to the sample person. Questions asked included: relationship to sample person, various ways in which person's health had improved or deteriorated, time period for the deterioration, whether the sample person currently required more or less care than previously required, types of activities for which the caregiver provided assistance, and attitude toward various caregiving functions. The respondent was asked if the sample person could be left in the home alone, whether sleep was interrupted because of the need to provide care, whether the caregiver was inconvenienced in some other way by the necessity to give care, and the caregiver's assessment of the sample person's health relative to his or her peers. The name, relationship, marital status, and education level of all persons residing in the household with the sample person were asked. The survey queried whether anyone other than the respondent provided care to the sample person, who had main responsibility for providing care, and if anyone else would provide care if the primary caregiver were unable to provide that care. The caregiver was also asked about problems that he or she had with the sample person, and whether they resulted in any added costs in providing care. Responses were provided for the items for which the caregiver spent money and the amount of extra money spent in the last month and last week.

Caregivers who resided with the sample person were asked if they would reside there if the person did not require assistance. Those who did not reside in the same household were asked about travel time to the sample person's home, and whether they had ever moved their place of residence to be nearer to the sample person. The caregiver was questioned about work outside the home, whether he or she was precluded from such work or worked fewer hours than desired because of the need to provide care. The caregiver was asked about about his or her attitude toward nursing homes. The caregiver was also asked about the relative distastefulness of performing various tasks with regard to the sample person. General questions were also included about the caregiver's health, income, marital status, race and ethnicity.

Interviews were also conducted with caregivers who were no longer providing care. The caregiver was asked why she or he stopped providing care. A series of responses were possible for those who ceased caregiving because the sample person's health either improved or deteriorated. The respondent was asked about the time period over which the sample person's health improved/deteriorated. The remaining questions followed the same pattern as those asked to the caregivers who were still providing care.

The 1984 Survey. The follow-up survey for 1984 had both a longitudinal and a cross-sectional component. The survey was intended to provide insights into the factors contributing to or inhibiting institutionalization. The 1984 survey design included four groups:

1. All of the persons who had functional limitations and were eligible for the full questionnaire in 1982.
2. All of the persons not eligible for interview in 1982 who were in institutions.
3. A subsample of the persons who were screened and were not eligible for the detailed questionnaire in 1982.
4. A sample of persons who had their 65th birthday since the 1982 survey.

The first two groups were administered a detailed questionnaire without screening. The latter two groups were screened for any functional limitations in 1984. Using components one and three, data were obtained on many of the factors contributing to later institutionalization together with those factors that deter residence in institutions. Final numbers of sample individuals in each category are not yet available. The total number of detailed interviews administered was about 12,000.

Three types of survey instruments were used in addition to the screener and control card. A questionnaire similar to the 1982 survey instrument was used for all functionally limited persons found in the community. A modification of that instrument containing ADL questions in addition to source of payment and selected demographic information was used for residents of long term care institutions. For persons who were deceased there was an instrument which ascertained from a proxy the residence at the time of death and other pertinent data. No survey of informal caregivers is available for 1984.

The screener asked age, race, marital status, sex, whether the sample person was deceased, the type of residence of living persons, and ADL status. As in 1982, the questions on ADL status asked whether duration was actually or expected to be at least 3 months. There was also an indication of whether the individual was interviewed directly or, if a proxy answered, the reason for that proxy. Finally, questions were also asked about prior admissions to nursing homes and number of living children.

The community was administered to all those residing in the community in 1984 and was similar to the detailed questionnaire described for 1982. The seven sections were the same as the 1982 survey. The first section of the questionnaire asked about specific conditions of the sample person That was followed by questions on ADL and IADL problems. Specific questions were included about others who provided help. That section of the questionnaire concluded by asking about impairments and range of motion.

The second section surveyed "other functioning," which mainly included questions about mental and emotional problems, social contacts and activities. Housing and neighborhood characteristics were covered in the third section. Specific questions included suitability of the housing for the elderly, availability of grocery stores and pharmacies, problems with crime and the respondent's opinions about nursing homes.

Health insurance, the topic of section 4, asked about Medicare, Medicaid, CHAMPUS, CHAMPVA and private insurance (including what was covered). Section 5 covered medical providers and prescription medicines used by the sample person. The questions on hospitalization asked about number of times hospitalized in the last 12 months and lengths of stay each time. The last two sections were on cognitive functioning, and military service, ethnicity, income and assets.

The deceased questionnaire was unique to 1984. This brief survey had two sections: health care and personal information. The health care section asked about nursing home, convalescent home and hospital stays if that was where the patient died. Questions included the source of payment for those stays. For patients who did not die in such institutions, the questionnaire asked about stays just prior to death. There were also questions about earlier periods of institutionalization. A specific question about hospice care was included. Finally, there were questions about others who provided care to the decedent, both paid and unpaid. Personal information surveyed included marital status, race, ethnic origin and income.

The institutional questionnaire was also quite short. Four sections were included: (1) cognitive functioning, (2) ADL, (3) admission, who pays and health insurance, and (4) certified beds. As with the other questionnaires, there was an indicator for whether the sample person or a proxy answered the questions.

The cognitive functioning section was asked only of the sample person and established the individual's ability to answer 10 simple questions (the Short Portable Mental Health Status Questionnaire). The ADL section was an abbreviated version of that administered in the community questionnaire. The categories were generally the same (focusing on help with eating, remaining bedfast, getting around, dressing, bathing, toileting), but within each category the questions were less detailed.

The third section asks questions about admission to the facility and periods of institutionalization prior to admission. There was also a question on hospital stays in the last 12 months. Finally, that section also asked about who paid for the care at admission and who was paying on the date of the survey.

A fourth section on certified beds was asked of a staff member in the admissions or billing office of the institution. Questions included total bed size, Medicare and Medicaid certifications and number of beds affected.

B. Health Interview Survey 1984 Supplement

The National Health Interview Survey (HIS) is conducted annually on a sample of 40,000 households. This represents a nationally weighted sample of the noninstitutionalized population. The survey collects data on the prevalence of illness (both acute and chronic), the utilization of medical services and other topics. The emphasis in the questions on use of services is for acute care; moreover, the data generally reflect brief periods of time before the interview. That is, although questions on hospital use are for the preceding year, other questions such as physician visits ask about the previous two weeks. The hospital questions ask about number of stays, whether there was surgery and lengths of stay. The survey also includes questions on general health, injuries, accidents and specific conditions of respondents. There are sections on activity limitations, use of preventive care and insurance. Demographic and other patient information obtained includes education, income, race, ethnicity, marital status, veterans status and housing conditions. By itself the HIS is not directly relevant to this analysis.

The 1984 HIS is, however, also collecting data for a supplement on aging. Designed to provide additional information on persons age 55 and older, the supplement contains detailed questions about family relationships, community-based homemaking services, restrictions on activities of daily living, specific impairments, and nursing home placements, both past and expected in the future. Such data will provide quite detailed information regarding use of community-based services that can be linked to the existence of health limitations and relationships with family members who can serve as caregivers. The health data collected on the regular HIS survey, however, is based on a shorter and more specific period of time. Hospital stays are recorded for any time in the last year and the supplemental questions do not directly link use of community services to an earlier hospital stay, for example.

The 1984 Supplement on Aging (SOA) included persons aged 55 and older in the 1984 NHIS household sample. Approximately 17,000 persons were sampled, including 7,000 in the 60-69 age bracket, 5,000 in the 70-79 age bracket, and 2,000 respondents over 85 years of age. It is important to note that in this survey, 93 percent of those surveyed were self-respondents. The SOA data included physical ability to perform certain activities, vision and hearing impairments, ADL and IADL limitations, and a special list of conditions including Alzheimer's disease. In addition, information was elicited on sources of support in the community, characteristics of housing and occupation, and retirement history. Finally, the mental health section of the SOA was quite extensive, since it contained a series of questions including the individual's attitude toward his/her own health, a depression scale (CES-D), the treatment of mental problems, and the taking of prescription medicine for depression as well as an experimental set of items to measure memory loss.

The Longitudinal Study of Aging (LSOA) is the follow-up in 1986 of the SOA sample. The LSOA is designed to measure changes in ADLs and IADLs, providers of help, living arrangement, institutionalization, and death. Hence, the LSOA will allow for the measurement of functional decline in the SOA sample, although provisions have not been made to study changes in cognitive impairment. The LSOA will entail a telephone follow-up of the entire over 85 year age group and a half sample of the 75-84 year age group.

C. EPESE

Information from the EPESE project is intended to provide information for developing strategies for the prevention of illness and impairments and to suggest ways to maintain the elderly person's function and independence in the community.

The East Boston study included a population of 3,812 individuals over 65 years of age resulting from an 84 percent response rate. In the Iowa study, an 80 percent response rate yielded a study population of 3,673 participants. The New Haven study population was a stratified random sample of 3,420 persons aged 65 and over representing more than 18,000 elderly New Haven residents. The New Haven participant resulted from an 82 percent response rate.

The EPESE study design involves a baseline survey and a 5 year surveillance period. In addition to identifying the prevalence of chronic conditions, data on disabilities, physical functioning, and vision and hearing impairments are being obtained. A mental status questionnaire has been administered to evaluate cognitive functioning. The survey information is supplemented by other sources including HCFA hospitalization records and death certificates. Proxy information is obtained if the participant cannot supply the necessary data. All participants are contacted annually. The first two re-contacts are telephone interviews, the third contact is a second household interview and two additional telephone interviews are planned for the last two years.

Cognitive disability is assessed with a test such as a mental status questionnaire (MSQ). The MSQ score then serves as an indicator of the level and quality of cognitive functioning at the time of testing. The MSQ for this project was derived from Pfeiffer´s (1975) "short portable mental status questionnaire" and consists of nine questions.

D. 1975-76 Cleveland Study

The Cleveland Study surveyed a random sample of 1,609 older people who were residents of Cleveland, Ohio and were not residents of institutions such as nursing homes. The sample was demographically comparable to the national population. In addition, a supplemental sample was drawn of 225 individuals who were SSI recipients. Case Western Reserve University personnel conducted the interviews from June through November 1975. Approximately one year later the sample was scheduled for reinterview. At that time, 1320 reinterviews were conducted since 21 of the original had died, 17 were institutionalized and the remainder were nonresponses.

The questionnaire used was the OARS instrument developed at Duke University and contained questions about an older person´s status in five areas of functioning: social, economic, mental, physical and activities of daily living. In addition to the physical conditions and disability assessment, a MMSE question was administered to the survey respondents. This questionnaire was administered as a preliminary questionnaire and 4 or more incorrect answers out of 10 (with a further screen for education level) directed the use of proxy respondents for factual types of questionnaires; attitude questions were still directed to the sample respondent regardless of his or her score on the MMSE.

The study also collected information on services provided to the elderly individuals by both formal and informal sources. Each piece of data was collected in a fashion that it could be related to an individual in the sample. This included the OARS questionnaire data, data on 28 different services provided, and on the services provided through Medicare and Medicaid.

As a result of the use of the extensive OARS instrument, the Cleveland study collected a considerable amount of information on the health status of the elderly population. In addition to the Pfeiffer SPMSQ, data are available on the mood, orientation and attitude toward life, as well as physical disability, chronic conditions. Moreover, the data set contains corroborating information on the various aspects of well being, including mental health, that was provided by an "informant." Finally, since data were collected on services available from informal (family, friends), and formal sources, patterns of resource consumption can be related to mental health status.

E. 1981-82 Long-Term Care Channeling Demonstration

A national Long-Term Care Demonstration Study (the "Channeling" study) was established in 1980 by DHHS to evaluate a case-management approach to organizing community-based long-term care for the disabled elderly as an alternative to institutionalization. Beginning early in 1982, ten demonstration projects were set up to serve clients through early 1985. As a demonstration project, the data collected were oriented to the specific purpose of evaluating needs of individuals and analyzing the impact of channeling on the types of services received. In addition to an initial screen and baseline assessment made of clients entering the demonstration, follow-up interviews were conducted at 6, 12 and 18 months on both the demonstration and the control groups. The last of the 18 month interviews was conducted in August 1984.

Persons interviewed were not drawn randomly from the population. Rather, they came to the attention of the screening unit when individuals initiated the contact or when they were referred by a formal provider organization.

These contacts were made in response to widespread publicity about the demonstration programs. About 7500 individuals were screened. After the screening interview, individuals were randomly assigned to a treatment group or a control group. The screening interview was limited to questions concerning the individuals' functional status, and to basic information about insurance coverage, living arrangements, institutional status, and whether informal caregivers provided services.

The baseline assessment interview, administered to participants in the channeling demonstration, supplemented the screening interview with questions on hospital admissions in the past year, specific health conditions, and functional status (in a more detailed form). Detailed questions were also asked about formal and informal support mechanisms. The follow-up interviews were designed to ascertain what changes had occurred in those same variables. In addition, two informal caregiver interviews were conducted. At 12 months about 5000 individuals were surveyed.

As part of the Channeling demonstration, a careful assessment of the availability of services in the ten survey areas was also conducted. Those profiles of the providers included management, staffing and expenditure information on all providers in the catchment area. The ten sites were:

- Miami, Florida
- Eight rural counties in eastern Kentucky
- York and Cumberland counties in Maine
- Baltimore, Maryland
- Greater Lynn, Massachusetts
- Middlesex County, New Jersey
- Cuyohoga County, Ohio
- Philadelphia, Pennsylvania
- Houston, Texas

The specific data items collected at the baseline assessment in the Channeling project included demographic and socio-economic characteristics, health conditions, number of medications, eyesight or hearing impairments, activities of daily living and instrumental activities of daily living dependencies, and satisfaction with life. In addition, SPMSQ was employed to systematize the assessment of mental functioning for care planning and to determine the necessity of using a proxy respondent. Because of the orientation of this study toward the use of services by the frail elderly in the community, the information on types and sources of services used were as extensive as one would find in any other study of this sort.

At the baseline assessment, over 40 percent of both treatment and control group interviews were completed without the use of a proxy respondent. Proxy only interviews occurred in about 30 percent of the cases. In these cases, the questions pertaining to mental functioning and sample member attitudes were not asked. Proxy respondents were required in situations where the screening information indicated that the sample member was not capable of being interviewed at all, when interviewers had to break off an interview because the sample member became very confused, disoriented, anxious or exhausted, and in situations where critical elements or numbers of questionnaire sections were missing at the end of the interview.

F. Other Community Based Demonstration Projects

In the 1970's, policymakers began to consider increased funding of home and community-based services as a cost-effective way of providing long-term care for aged, disabled, mentally retarded, and chronically mentally ill people. The Department of Health Education and Welfare, in cooperation with the states, initiated a series of research and demonstration projects to assess the effectiveness of such programs. Funded usually through Section 1115 waivers, the demonstration projects experimented with various screening and referral methods, payment for quasi-medical services, and innovative reimbursement methods. Under this type of demonstration, the Department tested a certain number of hypotheses by introducing an intervention into an ongoing system. In the process of developing the projects, data collection systems were developed to allow for the evaluation of the effects of the interventions. Hence, the information systems for most of the demonstration projects, like the LTC Channeling Project, contained patient-level data that could be used to study dementia.

Reviews of the community-based demonstration projects were conducted by Berkeley Planning Associates and Mathematica Policy Research. Table A.1 lists most of the demonstration projects, the size of their baseline samples, the number and intervals of individual patient follow-ups and the sources of data items. Table A.2 highlights the types of data that were collected by each demonstration project. In addition to the functional impairments, and presence and absence of incontinence, a large proportion of projects employed a mental status test. Moreover, while not indicated by Table A.2, considerable information exists on informal and formal sources of care received by the project clients.

G. California Medicaid Section 2176 Waiver

Section 2176 of the Omnibus Budget Reconciliation Act of 1981 (P.L. 97-35) provided that the Secretary of Health and Human Services (HHS) could grant waivers to States permitting Medicaid payment for home and community-based services for individuals who would otherwise need care in a nursing home. As of December, 1984, HHS had approved 86 waiver requests in 46 states and the

Table A.1

EVALUATION METHODOLOGIES

	Number of States	Number of Sites	Comparison Methodology	Baseline Sample Size	Length of Followup	Data Sources
Randomized Design						
Worcester Home Care (1973-1975)	1	1	Random assignment	485	12 months	Individual interviews Project records
NCHSR Day Care/Homemaker Experiment (1975-1977)	4	6	Random assignment	1,566	3, 6, 9, 12 months	Individual interviews Medicare records Project records
Georgia AHS (1976-1980)	1	2	Random assignment	1,332	6, 12, 18, 24 months	Individual interviews Project records Medicaid records (with Medicare crossover)
Wisconsin CCO (1977-1980)	1	3[a]	Random assignment	417	6, 12 months	Individual interviews Medicaid records Death records
Project OPEN (1979-1983)	1	1	Random assignment	335	6, 12, 18, 24, 30, 36 months	Individual interviews Project records Medicare records
South Carolina LTC (1980-1983)	1	1	Random assignment	615	3, 6, 12, 18 months	Individual interviews Project records Medicaid records
Florida Pentastar (1981-1983)	1	5	Random assignment plus comparison group outside area	935 (randomized) 111 (comparison)	12, 18 months	Individual interviews Medicaid records Medicare records Food stamp records
San Diego LTC (1981-1984)	1	1	Random assignment	819	3, 6, 12, 18 months	Individual interviews Medicare Part A records
Channeling (1982-1985)	10	10	Random assignment	2,749 (basic model) 2,859 (financial control)	6, 12, 18 months	Individual interviews Project records Medicaid records Medicare records Provider records Death records Caregiver interviews

Table A.1 (continued)

	Number of States	Number of Sites	Nonprogram Group	Baseline Sample Size	Length of Followup	Data Sources
Nonrandomized Design						
ACCESS (1975-1979)	1	1	County-level comparison of Medicaid nursing home expenditures	County-wide	24 months	Department of Social Service county-wide expenditure records
Triage (1977-1979)	1	1	Comparison group outside area (age differences)	502	6, 12, 18, 24 months	Individual interviews and diaries Project records Medicare records Medicaid records
On Lok (1979-1983)	1	1	Comparison group outside area, matched on on characteristics (race differences)	140	6, 12, 18, 24 months	Individual interviews
MSSP (1979-1983)	1	8	Comparison group within same area or similar county, matched on whether in hospital, nursing home, or community (comparison group less frail)	4,200	6, 12 months	Individual interviews Medicaid records Medicare records
Nursing Home Without Walls (1978-1983)	1	2	Comparison group within area or similar area matched on demographics, no individual match (age differences, race differences)	1,373	6, 12 months	Individual interviews Medicaid records Medicare records Food stamps, SSI records
New York City Home Care (1980-1984)	1	1	Comparison group, non-catchment area (impairment differences)	704	6, 12 months	Individual interviews Monthly diaries Medicaid records Medicare records

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[a] Although the demonstration was conducted in three sites, the randomized evaluation was done only in the Milwaukee site.

Table A.2

SAMPLE CHARACTERISTICS

	Percent 75+[a]	Percent White	Percent Female	Percent Married	Percent Living Alone	Percent Disabled On At Least One ADL	Percent Impaired On At Least One IADL	Percent Incontinent	Mental Status (Average Number Wrong 0-10)
Randomized Design									
Worcester Home Care (1973-1975)	--	--	71	29	43	41	--	--	--
NCHSR 222 (1975-1977)[b]	55	91	75	--	53	77	--	--	--
Georgia AHS (1976-1980)	--	53	74	25	33	60	--	--	3.1
Wisconsin CCO (1977-1980)[c]	37	71	80	12	48	62	97	--	--
Project OPEN (1979-1983)[c]	--	69	70	31	55	50	81	24	0.6
South Carolina LTC (1980-1983)[c]	--	70	78	29	25	95	97	58	3.5
Florida Pentastar (1981-1983)[c]	--	56	83	18	53	58	97	22	1.4
San Diego LTC (1981-1984)[c]	67	98	69	44	52	55	97	43	2.3
Channeling (1982-1984)	72	71	73	32	37	84	100	53	3.5
Nonrandomized Design									
ACCESS (1975-1979)[c]	80	70	92	23	—	82	99	44	2.4
Triage (1977-1979)[c]	73	--	72	44	39	54	94	--	1.7
On Lok (1979-1983)[c]	--	22	49	30	46	85	93	60	3.2
MSSP (1979-1983)[c]	--	68	71	23	51	61	80	47	1.7
Nursing Home Without Walls (1978-1983)	--	82	79	16	46	76	--	--	--
New York City Home Care (1980-1984)[c]	68	69	78	45	35	78	100	38	2.6

[a] Not given for programs admitting clients under 65 unless data for 65 and over sample were available.
[b] Percentages refer to homemaker services sample.
[c] Data for this project come from the final report of Berkeley Planning Associates, 1985.

District of Columbia (DHHS,1984). Under this program, 35,000 clients were aged or disabled, 17,000 were developmentally disabled and about 1,500 were chronically mentally ill. Because the 2176 Waiver Program required that procedures be established to assess the need for services by program applicants who were by definition, at risk of entering nursing homes, the 2176 Program provides a potential source of data for the study of dementia. A review of the information available from the Waiver Program (Vertrees, 1986) indicates that few of the specific projects currently have extensive patient level data bases, with the notable exception of the Multipurpose Senior Services Program (MSSP) in California.

The Multipurpose Senior Services Program (MSSP) is administered by the California Health and Welfare Agency. Like other 2176 Waiver projects, the goal of the MSSP is to provide home and community based care at per capita costs of care that do not exceed the per capita costs that would be incurred were the Waiver Program not in effect. Services under the MSSP program are provided through eight local sites which represent a variety of types of service agencies and geographic areas. Specific services include: case management, adult social day care, housing assistance, in-home supportive services, respite care, transportation, meal services, protective services and special communication.

The core of the MSSP is case management, in which clients are assisted by a professional team that assumes overall responsibility for eligibility determination, assessment, care plan development and service delivery. An initial full assessment is conducted for the purpose of developing a care plan covering the full range of required medical and social services. Following the implementation of the initial care plan, each client is thoroughly reassessed at least once every six months, depending upon the client's condition. The extensive assessment instrument records demographic and socioeconomic characteristics (e.g., age, sex, ethnicity, marital status, living arrangement), ADL (bathing, dressing, toileting, transfer, continence and eating), IADL (laundry, taking medication, transportation, housework, shopping, meal preparation, money management and telephoning), medical conditions and mental status. In addition, the SPMSQ is administered to the clients at the initial baseline assessment as well as routinely at the six month follow-up periods.

As a result of the periodic patient level assessments, longitudinal data are available from MSSP on 1900 community-based clients who are at high risk of entering nursing homes. A computerized management information system was developed for the MSSP that receives patient status and cost data from the eight program sites. In addition, services and expenditure data from the Medi-Cal program are drawn from paid claims tapes, and periodic data are drawn from Medicare and SSI/SSP tapes.

H. 1977 and 1985 National Nursing Home Survey

The 1977 and 1985 National Nursing Home Surveys (NNHS) are nationwide surveys of nursing home residents, discharges and staff, conducted by the National Center for Health Statistics. The sample was drawn from all nursing homes in the continental United States, regardless of level of care certification status. The 1977 survey included 1,451 nursing homes, 7,033 current residents, and 5,142 discharged residents. The 1985 survey completed work early in 1986.

The survey design for the two years was a stratified two-stage probability sample. The first stage involved a selection of staff, residents, and discharges from the sampled facilities. Estimates of the number and characteristics of discharges, measures of utilization, and costs reflected the experience during the preceding year. For 1977, a maximum number of sample observations per facility was established at eight for residents, eight for discharges, and twenty-three for employees. The average number sampled in each sample facility was five residents, four discharges, and ten staff persons.

The 1977 Survey contained the following questionnaires: (1) Current Resident; (2) Discharge Resident; (3) Facility; (4) Expense; and (5) Staffing. The 1985 Survey incorporated these five surveys and added a "next of kin" questionnaire for current and discharge residents. To add additional questions for 1985, however, some of the 1977 questions had to be deleted.

Current Resident Questionnaire. For 1977, demographic characteristics included information on resident's age, race, sex, marital status, date of admission, previous living arrangement and household composition, expected date of discharge, and expected household arrangement after discharge.

The 1985 survey asked where the resident had been staying immediately before entering the facility, and if it was other than a private residence, it identified the previous facility. For those who were discharged from a short-term, general hospital, the DRG category and primary diagnosis during that stay were recorded. The respondent was also asked about other conditions that developed during the hospital stay, whether any diagnostic or surgical procedures were performed at the hospital, and the number of nights spent at the hospital. The same set of questions was asked for any hospital stays that occurred while the sample person was a resident in the nursing home. Dates of admission and discharge for each hospital stay are recorded.

The 1977 survey included questions on impairments, identifying four mental impairments and thirty-three physical impairments. It asked if resident received medication, and frequency of visits by physician. It listed 41 possible primary diagnoses. The survey contained questions concerning activities of daily living such as assistance required in bathing, dressing, toileting, continence, and mobility. It asked about hearing, sight, speaking abilities, use of fourteen aids, and specifies others. Queries were made concerning five specific behavior problems and whether problems required extra nursing time. The questionnaire listed seven therapy services, specified others, and asked about hours of use during the past month. Questions were also included on whether the resident was allowed to leave the facility for recreational activities or overnight leave and on primary reasons for which the person entered the facility.

The 1985 survey asked for the resident's primary and secondary diagnoses at the current time and at the time of admission to the nursing home. Questions concerning specific conditions were confined to ten emotional/mental conditions. Queries concerning use of medication were dropped, as were questions concerning physician visits. Questions about services received in the previous week were excluded and those remaining questions concerned the provision of therapy services in the last month. The specific aids identified in the 1977 survey are not identified in the 1985 survey. Activities of daily living questions were included in the 1985 survey, and the respondent was asked if the sample person was permitted to leave the facility grounds. Six specific forms of disruptive behavior were identified and the respondent was asked whether the current resident exhibited any of those types of behavior. Additional questions dealt with disorientation and memory impairment as well as anxiety, depression or worry. The 1985 questionnaire contained detailed questions on the source of payment during the month of admission, including an identification of all sources of payment and the primary source of payment. The total charges billed for all care in the previous month and from the date of admission to the interview date were elicited, and all sources of payment for the previous month were identified.

Discharge Resident Questionnaire. This portion included data on age, sex, marital status at discharge, whether discharged dead or alive, where resident stayed after discharge, and type of facility.

The same four mental and thirty-three health impairments as in the current resident questionnaire were listed. Primary diagnosis at the time of admission, specifying 41 diagnoses and leaving open-ended question for all others was also recorded. The survey included questions on use of aids, identifying fourteen and specifying others and asked if resident saw a physician during the last stay, and what services were received during the seven days prior to discharge. Limited ADL questions were also included—was resident bedfast or chairfast, continent.

The 1985 discharge resident questionnaire asked about age, race, sex, marital status, date of admission, living arrangements before admission and whether the patient was admitted to a short stay hospital while a resident of the institution. Questions asked about the individual after discharge included where the person went at discharge, and if to another facility, details about that institution. Four activity limitation questions in the last 7 days before discharge of the patient are asked. This portion of the questionnaire was abbreviated considerably as compared with 1977.

Facility Questionnaire. For 1977, the facility questionnaire contained identification and descriptive information (e.g., age of building; whether the facility was a distinct nursing home unit of a hospital; total number of rooms and beds). The survey also included questions on Medicare and Medicaid certification, number of beds certified, reimbursement mechanisms authorized by Medicare and used by the facility. It included questions on the level of certification, (SNF or ICF) the number of beds at each certification level, and the reimbursement methods for Medicaid patients.

The 1985 questionnaire was much more limited with respect to these questions. Ownership, number of beds, whether the facility was owned by a hospital, whether it was part of a chain and whether beds were licensed was included. In addition, there were questions on the level of care, whether certified by Medicare or Medicaid, number of days by certification level, and whether services were provided to non-residents. The major exclusions as compared to 1977 were questions on the age and structure of the facility, reimbursement mechanisms and swing beds.

Staffing and service questions for 1977 included: the number of full-time and part-time staff positions vacant by type of position; and professional qualifications and number of hours worked by the person in charge of nursing care on the previous day's day and night shift. Staffing questions in 1985 are limited to average hours worked by some of the staff in the last week. Also included was 1977 is information on the number of physicians who saw private patients in the facility, if the facility had a medical director, and by what arrangement medical direction was provided and questions about provision of seven specified therapies by a trained therapist. The physician questions were retained in 1985, but the therapy questions were very limited.

Expense Questionnaire. The 1977 and 1985 questionnaires identified the dates of the most recent fiscal year and included information for that time period. Expenses were identified by various costs centers, and revenues were disaggregated only into patient care revenues (which includes both public and private payments) and non-patient revenues.

Staff Questionnaire. The 1977 staff questionnaire was administered to a sample of staff. It included questions on the length of time that the staff person worked at the nursing home, the length of time worked at other nursing homes, and whether the staff person was employed under a contract. Questions concerning the type of tasks performed by the staff member, usual number of hours per week worked, and usual number of hours worked per week in a similar capacity at another facility, were included.

The 1985 survey was limited to registered nurses. Specific questions include demographic variables, position, normal hours worked, salary, years on staff and whether the respondent works elsewhere. Nurses were also asked frequency of performing 13 types of activities, participation in decision-making and importance of employment conditions such as fringe benefits, characteristics of the facility and work schedules.

"Next of Kin" Questionnaire. The 1985 "next of kin" questionnaire, conducted by telephone, established whether the sample person was currently living or dead. For deceased persons, information was obtained on date of death and whether the person received hospice care in the final six months of life.

Background information on the sample person included marital status, state of birth, and whether the sample person ever served in the Armed Forces.

A series of questions dealt with usual living arrangements before entering the sample facility. For those living in a private residence, questions concerned whether the home or apartment was rented or owned, and if owned, whether there was an outstanding mortgage. The number of persons living in the household, and relationship of persons in the household to the sample person were identified.

The respondent was asked if the sample person was admitted to the facility from a general or short term hospital. The respondent was also asked when the person last lived in a private house or apartment and whether, during the twelve months prior to admission, the subject became suddenly ill or injured, suffered gradually worsening health, or was in poor condition most of the year. The type of condition during that time period was identified. For those sample persons who were in a hospital during the twelve months prior to admission, the number of hospital stays and number of days spent in the hospital were reported.

A series of questions was asked concerning health status at the time of admission to the nursing home. The respondent was asked about the sample person's need for assistance in activities of daily living and whether the person was receiving such assistance at the time of admission. Specific questions dealt with the presence of an ostomy or catheter and whether the sample person required and received help related to these devices. The presence of specific diseases was queried. The diseases or conditions identified included: hip fracture; other fracture; arthritis; osteoporosis; other disease or conditions of the bones, muscles or joints; myocardial infraction; stroke; arteriosclerosis; other circulatory or heart problem; cancer; Alzheimer's disease; confused or forgetful; senility; disruptive behavior; other emotional, mental or nervous condition; and other diseases or conditions. The respondent was also asked if the sample person entered the nursing home due to: recuperation from surgery; absence of a caregiver in the home; inability to afford nursing care in the home; requirement for more care than family members could provide in performing everyday activities.

Another series of questions dealt with the sample person's history of nursing home stays. For the first and subsequent nursing home stays, the dates of admission and discharge, and name of the facility were identified. It was also possible to identify those who were still residents of a nursing home. For those who had been discharged and were no longer current residents in a nursing home, the discharge destination and current residence of the sample person were determined. The respondent was asked whether the sample person was living with family members, non-family members, or alone. Questions were also asked concerning hospital stays since discharge from the nursing home, including the name of the facility, date of admission, and date of discharge.

The sample person's eligibility status with regard to Medicaid, at the time of first nursing home admission was established. For those ineligible upon admission, the reason for ineligibility was identified as too much income/assets, owned property, age or other. The respondent was asked if the sample person ever subsequently became eligible for Medicaid, and if so, what year. The respondent was also asked whether any family member had to take out a loan or sell assets to help pay for the sample person's care, or whether any family member had to work extra hours or begin working to help pay for care. Sources of payment for care are specifically identified. For those residents living with family members, family income was asked in five broad categories, ranging from less than $5000 to more than $25000.

I. 1981 San Diego Nursing Home Study

The San Diego Incentive Reimbursement Study was conducted by staff of the National Center for Health Services Research (NCHSR) to demonstrate that a reimbursement system could be established that would significantly affect nursing home admission practices. This study was implemented in San Diego, California and involved 36 proprietary skilled nursing facilities (SNFs). These facilities accounted for about 70 percent of all Medicaid SNF patients in San Diego County. In addition to the SNFs selected for the study, the County-operated Edgemoor Geriatric Hospital was included as one of the control facilities.

An extensive assessment instrument was developed to provide the information needed to conduct the incentive reimbursement study and to provide data for other research purposes. It was administered to Medicaid eligible patients in treatment and control nursing homes over an 18-month period (November 1980 to April 1982). This assessment instrument included items on primary and secondary diagnoses, activities of daily living (including continence), behavioral patterns, disturbance of mood, communication (both expressive and receptive), vision, orientation, hearing, and services received including medications. Moreover, a mental status questionnaire and a contentment scale were administered.

The mental status questionnaire (MSQ) was employed to determine a person's awareness of the world around him in terms of time and place (orientation) and in terms of memory loss of personal and factual information. The MSQ used in this study was used by Robert L. Kahn and his colleagues to measure residents of skilled nursing homes, homes for the aged, and state psychiatric hospitals. The questionnaire, as administered, took 5-15 minutes to complete.

A general well-being scale (GWB) was designed to assess selected aspects of the respondent's subjective views of his or her well-being. The scale that was used was developed by Harold J. Depuy for the NCHS as part of the National Health and Nutrition Examination Survey (HANES) and used in that survey from 1971-1975.

Edgemoor was included in the study in October 1981 which was after the baseline period for the other facilities. Further, because of the October 1981 start-up date, all assessments prior to October 1, 1981 were completed as record assessments because it was not possible to conduct retroactively the MSQ or Contentment Scale portions of the assessment. Assessments completed after October 1, 1982 did include the MSQ and Contentment Scale components. All assessments were limited to new admissions only; on board residents were not assessed.

J. Medicaid Nursing Home Reimbursement Systems

Recent concern on the part of state Medicaid programs that an average payment for nursing home care provides disincentives for nursing homes to admit patients who are costlier than the average payment has resulted in the development of "casemix" reimbursement systems. By design, a casemix reimbursement system pays providers according to the relative costliness of their patients. In order to account for differences in the resource requirements of different types of patients, several states conducted studies on the relative resource requirements of different patients. Subsequently, reimbursement systems were developed which embodied the results of the casemix studies. The information system required for the implementation of the casemix reimbursement systems entailed the continuous assessment of patients in nursing homes. Hence, these data sources provide a potentially rich source of information for studying dementia patients in nursing homes.

At the present time, Illinois, Ohio, Maryland, West Virginia, and New York, reimburse nursing homes according to a casemix system. To do so, these states maintain longitudinal information on patients in the nursing homes which includes data on activities of daily living and special services, and in many cases, behavior, orientation, and mood of patients. Table A.3 highlights the specific types of information that are collected by the casemix reimbursement states. None of the states employs a test such as the SPMSQ to determine if the patient is cognitively impaired. Table A.3 also includes Minnesota, which will implement a casemix system shortly, and Texas which has recently completed a study of casemix and resource consumption in nursing homes in the state and is in the process of developing a casemix reimbursement system.

K. **Patient Assessment Computerized**

Patient assessment can be defined as the summarization of patient information with regard to socio-demographic data, medical conditions, functioning ability, and service provision. The Patient Assessment Computerized Program (PAC) is a one page patient assessment form computerized to generate any of twelve output documents. The system was developed by National Health Corporation, which operates a chain of 8,000 bed nursing homes in nine Southern states. The patient assessment form is designed to monitor the patient so that he or she receives only the needed care in the appropriate setting with regard to cost and quality. The form is completed upon admission, change in level of care, at thirty, sixty, and ninety day intervals, and upon discharge or death. Information is available for National Health Corporation's patients over the past ten year period, totalling approximately 16,000 observations.

The survey form is separated into six major sections: basic data, diagnosis and evaluations, problem identification, professional services,

Table A.3. Data Items from Casemix Reimbursement States

State	Diagnosis (Dx)	Impairments	ADL	Behavior, Mood, Orientation
New York	Primary Dx only	—	4 ADLs	Aggression, disruption, social-appropriate behavior, hallucinations
Ohio		—	3 ADLs plus continence	Behavior, psychosocial status
Illinois	Primary Dx	—	5 ADLs plus continence	Mental status, behavior
Maryland		—	4 ADLs plus continence	
Minnesota	Multiple Dx	Vision, hearing, communication	11 ADLs	Orientation, behavior
West Virginia	Primary & Secondary related to need for nursing home care	—	3 ADLs plus incontinence	Behavior, threat to others, confusion
Texas*	Multiple Dx	Vision, hearing	6 ADLs plus continence	Mood, orientation and memory, group participation

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*Texas is in the process of developing a casemix system; table items are from a casemix/resource use study.

rehabilitative services, and special treatments and services. Identifying information includes the patient's social security number, medical record number, facility code, physician code, and monthly charges.

Basic data includes information on sex and birth date, race and ethnic origin, marital status, number of sons and daughters, responsible party, religious preference, education, occupation, residence, source of payment, living arrangements, transfer codes, and information concerning utilization review and certification status. The diagnosis and evaluation section contains a primary diagnosis and up to eight secondary diagnoses, cause of death, number of incidents and accidents, patient status, and rehabilitation potential. The problem identification section contains information on walking/wheeling, activities of daily living, bladder and bowel functioning, decubitus, height and weight, special senses, communication of needs, orientation, behavior, interaction with others, social contacts, social skills, discharge potential, social support systems, and activities. The professional service section contains information on the frequency of physician services and the type of consultations required. The rehabilitative services section highlights the type and frequency of services delivered and the result. The special treatments and services section indicates the special services and treatment required, restraint needs, diet, preventive and/or screening procedures, medications, and drug review.

L. Epidemiological Catchment Area Studies

The overall goals of the ECA Program were to measure the prevalence of specific mental disorders in the total population of five U.S. communities, study the longitudinal course of the disorders, and determine the use of mental health services. The ECA study sites are: New Haven, Connecticut, Baltimore, Maryland, St. Louis, Missouri, Durham, North Carolina, and Los Angeles, California. Despite the similarity in overall goals across the five sites, sampling procedures differed as a consequence of additional goals for specific ECA projects. Because many psychiatric disorders have extremely low prevalence, sample sizes had to be large enough to obtain adequate coverage of rare types of disorders, particularly in demographic subpopulations. At each of the ECA sites, the sample consisted of at least 3000 persons from the household resident population. These respondents were reinterviewed after 6 months and again after one year. In three sites, the elderly were oversampled: New Haven added 2,000 over age 65 respondents to their basic sample, Baltimore added 500 over age 65 to their sample, and Durham added 900 over age 60 to their sample.

The initial interview of the ECA Program required 70-90 minutes of interview time, and subjects were requested to participate in subsequent follow-up interviews. The first four sites exceeded the NIMH specified response rate of 75 percent, but doing so required almost a full year of field work at each site and in some instances, more than 20 visits were required to obtain an interview. The overall response rates for the Household Survey at the sites were: 77 percent for New Haven; 78 percent for Baltimore; 80 percent for St. Louis; and 77 percent for Durham. At the Baltimore site, analyses of mental health problems, stratified by days to completion or number of contacts presented a pattern suggesting increased prevalence rates among hard-to-recruit subjects in the cases of cognitive impairment and antisocial behavior. For example, between 0-30 days, the percentage with cognitive impairment was 7.8 percent, while a percentage of 10.6 was recorded for those requiring 151+ days for case completion.

A series of core questions on health services use were included in the survey instruments used in the five ECA sites, although some variations across sites existed in the application of the core items and the addition of questions seeking more detailed information. The sets of questions covered utilization of services in five content areas: (1) usual source of ambulatory care; (2) ambulatory general medical resource use; (3) ambulatory mental health specialty, non-specialty, and other human service use; (4) hospital and nursing home admissions for physical reasons; and (5) admissions to hospitals and residential treatment centers for mental health reasons.

A special Diagnostic Interview Schedule (DIS) was developed for the Program; in cases where a respondent appears confused or seriously demented, the interviewer gives and scores the Mini-Mental State Examination.

M. Medicaid Tape-to-tape Data

HCFA is currently engaged in a project to develop a person-level Medicaid data base using MMIS (Medicaid Management Information System) data obtained directly from state Medicaid programs. This data base is designed to support various types of research on the Medicaid program by providing a set of detailed information that is comparable across states.

The tape-to-tape data base when it is completed will contain information on the Medicaid programs over 5 years, 1980 through 1984, in 4 states. Those states are California, Georgia, Michigan and Tennessee. In addition, it will contain 1980 through 1982 data from New York. The files will comprise information on enrollees, recipients, providers, and utilization. Separate claims files are being created by state, year of service and five claim types. The claim types are inpatient hospital, long term care, drug, dental, and ambulatory care. Variables being collected include:

- enrollee I.D. numbers—Medicaid, Medicare, Social Security
- enrollee and recipient (for each bill) age, race, and sex
- enrollee and recipient eligibility group
- hospital discharge status
- Medicaid covered days
- Medicare amounts paid
- nursing home and home health days and visits

IMPACT OF DEMENTIA WITHIN MINORITY GROUPS

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IMPACT OF DEMENTIA WITHIN MINORITY GROUPS

I.

A. Introduction

The purpose of this paper is to provide a foundation for understanding the impact of dementia on the ethnic minority elderly. Here, the concept of ethnic minority elderly will be used to refer to those persons of color who have reached a point in the life course which only could, be considered as aged. The more traditional chronological age of 60 or older in describing the elderly is often not an appropriate measure. It may be more significant to look at the functional level of the individual's physical and mental health status. Because of many situational circumstances, aging of members of ethnic minority groups could come as early as 55 years. Groups under discussion are composed of persons of American Indian/Native American, Asian American/Pan Asian, black American, and Hispanic/Latino American heritage or decent these issues will be discussed below.

Several principal elements will be reviewed to achieve the goals of this paper. First, there will be an examination and analysis of demographic variables pertaining to the different ethnic minority elderly

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groups. A review of key concepts, such as family structure, ethnic minority community structures and informal support systems will be delineated. Cross-cultural utilization patterns of formal health and social services also will be explored and discussed. In addition, attitudes towards dementia and the impact on the ethnic minority elderly and their families will be analyzed.

Included in the paper is a discussion of informal caregiving in minority groups as well as those characteristics of each group that effect utilization of formal health and social services by individuals with dementia or related disorders.

This paper is warranted because older members of minority groups are among the most rapidly growing segments of the total population. Within this group, such growth may indicate improved life conditions. It may also indicate a potential increase in the incidence of Alzheimer's type dementia that could reach proportions simillar to the estimated four to six percent of the general elderly population.

B. Overview and Definition of the Target Populations

Several concepts such as race, ethnicity and minority are critical in any discussion of the ethnic minority elderly and bears further clarification. In most instances, race is based soley on more common and easily distinguishable biological features such as skin color and grade of hair. In contrast, ethnicity as a major sociological concept of long standing, conveys a "sense of peoplehood" or the individual's historical identification and close personal attachments with one's own ethnic group. Ethnic group refers to "any group which is defined or set off by race, religion, national origin, or some combination of these categories" (Gordon, 1964). The ethnic group gives rise to a system of institutions and informal social relationships that facilitate and support primary group involvements with members of one's own group. Finally, minority group can be defined as:

> one whose members have been singled out for differential and inferior treatment on the basis of such characteristics as their race, sex, nationality, or language...not simply a smaller numerical one (Jackson, 1980).

- AMERICAN INDIANS/NATIVE AMERICANS

This group consists of the 278 federally recognized Indian tribes, Aleuts, Eskimos and Alaskan natives defined by Public Law 93-638 of the Indian Self Determination and Education Assistance Act of 1975. The Indian Self Determination Act provides for more precise and consistent definitions for the terms "Indian" and "Indian Tribe". The definitions in the Act also "give first priority to members and governments of federally recognized tribes" (National Indian Council on Aging, 1981).

- ASIAN AMERICANS/PAN ASIANS

There are three major subgroupings in this category. The first involves the Pacific Asian population from the Pacific basin which includes Fijians, Guamanians, Micronesians, Samoans, Tongans, Cambodians, Chinese, Japanese, Koreans, and Philipinos. Indochinese who are the Burmese, Cambodians, Laotians, Thais, Vietnamese, and Hmong make up the second subgroup. The third subgroup includes the East Indian or Indian subcontinent people from India, Pakistan, Nepals, Malaya, and Indonesians.

- BLACK AMERICANS

Those persons who are identified as either black or Negro, and those individuals categorized as Jamaican, West Indian, Haitian, or Nigerian are classified as black Americans.

- HISPANICS/LATINO AMERICANS

This group may be of any race. It includes persons of Mexican, Cuban, and Puerto Rican decent, as well as those individuals of Central and South American, and European origins.

The following section focuses on selected sociodemographic variables that will guide the exploration into the similarities and the differences between ethnic minority elderly subgroups.

C. Demographic Indices of the Target Population: Implications for the Dementias

Growth of the ethnic minority elderly group as a whole is extremely significant in terms of its impact on the economic, social, and health aspects of the society as a whole. These individuals are among the most vulnerable in our society. This growth has major implications for the current and future impact of dementia and related disorders on the ethnic minority elderly and the'r families and on the appropriate allocation of resources to meet projected emergent need.

The black elderly population grew "by 35 percent, while the older Pacific/Asian and Native American ('other races') populations increased by 90 percent" (Manuel and Berk, 1983). With the exception of Hispanics, the minority elderly population is expected to grow from 3.4 million in 1980 to 13.1 million in 2030 (Fowles, 1983). A significant 283 percent growth rate in 50 years (Fowles, 1983).

Current gerontolgical literature suggests that the ethnic minority elderly are more likely to live in poverty, suffer from poor health and physical impairments than the majority culture. This will be expanded upon later in this section, but first, data sources and related data source problems will be addressed.

The value and accuracy of much of the existing data sources pertaining to the minority elderly is questionable. In part, this can be attributed to the fact that much of the data utilized is subject to undercounts and confusion related to cohort characteristics. The principal difficulty stems from the United States Census itself which continuously undercounts ethnic minorities and which also confuses the construct of race with ethnicity. Blacks can serve as an example of the undercount issue. According to Siegel and Davidson (1984), in reference to the 1980 Census, "the figures for the older ages are subject to a substantial degree of error." Early indications from the 1980 census data estimates show an overcount of the older population. However, for "all ages" there is a net undercount of blacks by nearly five percent (4.8%) as opposed to a comparable group from the majority culture with a net overcount of 0.6 percent. For those persons 65 years of age and over, there is a net overcount of 2.0 percent and 1.1 percent for both the black and the general population elderly respectively. Net undercounts for the black elderly are noted in the 55 to 65 (3.1%) and 75 (3.1%) years of age and over categories. Interestingly enough, there are no net undercounts for the general population elderly in any of the age categories.

Hispanics and other ethnic minority populations illustrate the problems in the data issue relative to sorting for ethnicity. It is significant to note that there is no further breakdown by ethnicity or race, and that individuals of Hispanic origins who did not specify their race were assigned to one of the "races", principally that of the United States general population, Caucasian (Siegel and Davidson, 1984).

Much of the available statistical data does not consistently provide a breakdown of data by age categories or the different racial/ethnic subgroups. For example, the only possible way to obtain selected statistical data by specific ethnic subgroups and different age categories is to tabulate the available data in separate state census reports. A further problem with the census data is the underenumeration of the illegal immigrant population of blacks. whites, and other ethnic minority individuals.

Data derived from other sources, such as health information from the National Center for Health Statistics, also cannot generally be broken down by ethnic subgroups. Many times since older blacks are the only group noted, other ethnic minorities are classified as "all others". This practice of global groupings into categories such as, white, blacks, and others, therefore results in a considerable loss of information.

Census figures on the general population elderly are prone to errors. Problems with census undercounts, the absence of clear cohort characteristics, and inaccurate racial and ethnic breakdown are common. Such data continues to confuse constructs of race and ethnicity and it does not present an incisive division of age categories. It is evident that data on the minority elderly must be broken down into clear-cut categories so that the information can be utilized to look at the differences and similarities within and between the various racial and ethnic groups. Accurate data is of vital importance in the study of late life dementias where basic epidemiological research efforts are currently getting underway. It would facilitate the development of a more precise data base on the ethnic minority elderly that would enable us to assess the frequency, type, and impact of the late life dementias and related disorders.

1. Size and Proportion of Older Minorities

According to the 1980 Census data, the total number of non-institutionalized persons in all races in the 55 years of age and over category is 47,243,898. Of this number 89.2 percent were members of the general United States population/majority culture. The black elderly continue to be the largest minority group in size and composition with 3,993,161 individuals or 8.5 percent of the total population 55 years of age or older. Of the remaining groups in this same category, the Pacific Asians are .9 percent or 439,642, .3 percent or 153,461 American Indian, Eskimo and Aleut, and 1.1 percent or 502,816 "Other". Some Asian and Pacific/Islander groups, such as the Cambodian, Laotian, and Thai, were included in the "Other" category. Persons of

Hispanic decent who may be of any race consisted of 3.1 percent or 1,484,059 of the total population in this age group.

These percentages of racial and ethnic breakdown continue to be relatively constant over the remaining age categories of 65 and over with 25,544,133 individuals, and for the 9,966,547 persons in the 75 years and over age group.

2. Age Categories by Racial and Ethnic Groups

The categorical age group breakdown of all persons 55-64; 65-74; 75-84; and 85+ are included in Table 1.

Table 1.

Racial and Ethnic Composition of Persons 55 Years and Over by Age and Race (Non-Institutionalized)

RACE	55 to 64	65 to 74	75 to 84	85 and Over
All Races Total	21,699,765 100%	15,577,586 100%	7,726,826 100%	2,239,721 100%
White	19,210,785 88.5%	13,905,249 89.3%	6,994,079 90.5%	2,044,705 91.3%
Black	1,907,335 8.8%	1,339,974 8.6%	586,991 7.6%	158,861 7.1%
American Indian, Eskimo, Aleut	78,673 .4%	48,142 .3%	20,794 .3%	5,852 .3%
Asian/Pacific Islander[1]	227,808 1%	137,765 .9%	60,215 .8%	13,854 .6%
Other	275,164 1%	146,456 .9%	64,747 .8%	16,449 .7%
Spanish Origin[2]	775,274 3.6%	457,114 2.9%	202,841 2.6%	48,830 2.2%

[1] Some Asian and Pacific Islander groups such as Cambodian, Laotian, are included in the 'Other' category.

[2] Persons of Spanish Origin may be of any race.

Source: U.S. Bureau of the Census. Age, Sex, and Spanish Origin of the Population of the United States, by Regions, Divisions, and States: 1980, Series PC80 S1-1, pp. 3.

In the first category, 55 to 64 years old, there is a total of 21,699,765 individuals. Of this number 88.5 percent are of the majority culture, 8.8 percent are black, .4 percent American Indian, Eskimo and Aleut, 1 percent Asian/Pacific Islanders, 1.3 percent "Others" and 3.6 percent of persons of Hispanic decent.

The second category, 65 to 74 years of age, consists of a total of 15,577,586 individuals. The percentages of racial and ethnic breakdown is 89.3 percent white, 8.6 percent black, .3 percent American Indian, Eskimo, and Aleut, .9 percent Asian/Pacific Islander, .9 percent "Other" and 2.9 percent of Spanish Origin.

The 75 to 84 years old age group is composed of 7,726,826 individuals. Of this number 90.5 percent are of the majority culture, 7.6 percent are black, .3 percent are American Indian, Eskimo, and Aleut, .8 percent Asian/Pacific Islander, .8 percent "Other" and 2.6 percent of persons of Hispanic decent.

The fourth and final category, 85 years of age and over has 2,239,721 individuals. The percentage of general population elderly is 91.3, followed by blacks with 7.1 percent, "Others" with .7 percent, Asian/Pacific Islanders with .6 percent, American Indian, Eskimo and Aleut with .3 percent and persons of Hispanic decent with 2.2 percent.

The percentages across all of the age group categories remain relatively consistent. One difference, although small in terms of percentages, is that the majority culture actually increases in each of the separate age categories. The rest of the groups either remain at their previous percentage or show a slight decline.

Utilizing separate state reports from the 1980 census, Manuel and Berk (1983) tabulated selected ethnic minority population subgroups, 65 years of age and over. Within the Hispanic population, nearly 52 percent are of Mexican American descent, followed by Cubans (13.7%), Puerto Ricans (9.8%) and others (24.7%). Among the Asian/Pacific Islanders the three largest groups are the Chinese (27.4%), the Philipino (27.0) and the Japanese (25%). The last group, Native Americans is primarily American Indians (96.7%). This breakdown of the ethnic minority groups, although limited to one age category, does provide a more descriptive portrayal of the major ethnic subgroups. Given the present state of the art, more detailed delineations among the ethnic minority subgroups are essential for the development of valid background materials upon which to project estimations of demented individuals.

3. Life Expectancy

Life expectancy at birth for all races and both sexes is 74.2. (see Table 2). At age 65 life expectancy of women is higher than that of men in all categories. Blacks of both sexes have a lower life expectancy (68.7) than the general population elderly (74.8). Black women rank second behind their majority culture counterpart in terms of life expectancy, while the black male ranks last with a life expectancy of 64.4 years at birth.

The lower life expectancy might indeed work as a counter trend toward high numbers of demented individuals in the ethnic minority ranks. However, because of improving life expectancy rates among these groups, there still needs to be a serious concern at the policy level.

Table 2.

Life Expectancy at Birth and at Age 65 According to Race and Sex, 1981

	At Birth	At Age 65
All Races:		
Both Sexes	74.2	16.7
Male	70.4	14.4
Female	77.9	18.6
White:		
Both Sexes	74.8	16.8
Male	71.1	14.4
Female	78.5	18.8
Black:		
Both Sexes	68.7	15.2
Male	64.4	13.2
Female	73.0	17.0

Source: U. S. Senate Special Committee on Aging. American in Transition: An Aging Society, 1984-85 edition. p. 19, Table 1-5, 1985.

4. Geographic Distribution

Of the total 47,243,898 individuals 55 years of age and older, 32.8 percent reside in the South, 26 percent in the North Central, 23.9 percent in the Northeast, and 17.3 in the West (U.S. Bureau of the Census, 1981).

The urban-rural composition of the various racial/ethnic groups varies (See Table 3).

Table 3.

Distribution of the White, Black, and Hispanic Populations 65 Years and Over by Metropolitan and Nonmetropolitan Area: 1980

(Numbers in thousands. Excludes residents of institutions)

Race and Spanish Origin	Total	Metropolitan Areas Total	Metropolitan Areas Central Cities	Metropolitan Areas Outside Central Cities	Nonmetropolitan Areas Total
Number					
Total	23,743	15,084	7,162	7,922	8,659
Percent	100.0	63.5	30.2	33.4	36.5
White	21,446	13,495	5,970	7,525	7,951
Percent	100.0	62.9	27.8	35.1	37.1
Black	2,019	1,377	1,056	321	642
Percent	100.0	68.2	52.3	15.9	31.8
Hispanic[1]	563	461	291	170	102
Percent	100.0	81.7	51.7	30.2	18.1

[1] Hispanics may be of any race.

Source: U. S. Bureau of the Census, Demographic and Socioeconomic Acpects of Aging in the United States, Current Population Reports, Special Studies P-23, No. 138, Table 4-8, 1984.

The urban and rural distribution of the general population elderly, as well as the black and Hispanic elderly 65 years of age and over highlights several differences. From a total number of 23,743 thousand elderly persons it was found that 63.5 percent reside in metropolitan areas. More than 33 percent reside outside of central cities. For the white elderly, more than 63 percent reside in large metropolitan areas although less than 28 percent live in the central city. A large proportion (37.1%) of the white population 65 years of age and older reside in nonmetropolitan areas (U.S Bureau of the Census, 1984).

Residential patterns of the black elderly vary from that of the white population in that a greater proportion (68.2%) of the group lives in urban areas. Unlike the general elderly population, more than half (52.3) of the black elderly are concentrated in central cities with less than 32 percent living in nonmetropolitan areas (U.S. Bureau of the Census, 1984). Since this is one of the largest ethnic minority groups with a "rural" contingent - close attention needs to be given to the special problems of the rural elderly taking into account issues pertaining to dementia and related disorders.

For the elderly of Hispanic decent, the large majority, nearly 82 percent live in metropolitan areas. Approximately 52 percent of this group reside in central cities with approximately 18 percent living in nonmetropolitan areas (U.S. Bureau of the Census, 1984).

Geographic distribution has major implications for the ethnic minority elderly with dementias or related disorders. A significant number of these individuals still reside in rural areas where there are fewer services. The exodus of younger family members from rural areas and in recent years from cities to suburbia has left many of the ethnic minority elderly with fewer nearby informal supports. This problem is componded even more by the changing household composition.

5. Household Composition

Age variations in marital status of the 55 years and over age groups indicate that there are many similarities between the different ethnic groups. For the total population of all races 55-64, 74 percent are married with spouse present. There is a decline in the second category, 65-74 years old, to 61 percent, while at the same time there is an increase in the number of widows at 26 percent. This decline in the percentage of married individuals with spouse present continues in the last category of 75 years of age and over with 34 percent, and a further increase in those widowed at 34 percent.

This same trend is true for the American Indian, Eskimo and Aleut, Pacific Islander/Asians and persons of Hispanic decent. The one exception was the black elderly in the 65-74 year old age group which fell below 50 percent (44%) in the married category with spouse present. (Table 4)

Table 4.

Marital Status for Persons 55 Years and Over by Race, Etnicity and Age: 1980

	Total	Single	Married Spouse Present	Married Spouse Absent	Widowed	Divorced
All Races						
55-64	21,756,071	1,101,076	16,115,727	692,484	2,472,229	1,374,555
	100%	5.1%	74.1%	3.2%	11.4%	6.3%
65-74	15,590,108	914,603	9,435,178	432,717	4,084,817	722,793
	100%	5.9%	60.5%	2.8%	26.2%	4.6%
75+	9,908,278	663,232	3,345,221	322,487	5,288,691	288,647
	100%	6.7%	33.8%	3.2%	53.4%	2.9%
American Indian Eskimo/Aleut						
55-64	85,520	4,535	53,463	5,095	13,323	9,104
	100%	5.3%	62.5%	6.0%	15.6%	10.6%
65-74	51,816	2,480	26,362	2,505	16,430	4,039
	100%	4.8%	50.9%	4.8%	31.7%	7.8%
75+	27,738	1,260	8,137	1,206	15,587	1,548
	100%	4.5%	29.3%	4.3%	56.2%	5.6%
Asian/Pacific Islander						
55-64	237,396	11,971	166,659	19,893	29,331	9,542
	100%	5.0%	70.2%	8.4%	12.4%	4.0%
65-74	141,621	7,682	77,866	13,619	37,427	5,027
	100%	5.4%	55.0%	9.6%	26.4%	3.6%
75+	79,886	4,969	25,981	5,659	40,906	2,371
	100%	6.2%	32.5%	7.1%	51.2%	3.0%
Black						
55-64	1,874,575	135,484	977,755	213,195	360,388	187,753
	100%	7.2%	52.2%	11.4%	19.2%	10.0%
65-74	1,330,535	80,323	585,644	103,893	470,467	90,208
	100%	6.0%	44.0%	7.8%	35.4%	6.8%
75+	736,336	41,160	196,733	41,461	426,670	30,312
	100%	5.6%	26.7%	5.6%	57.9%	4.1%
Spanish Origin[1]						
55-64	766,342	48,858	504,402	60,943	89,611	62,528
	100%	6.4%	65.8%	7.9%	11.7%	8.2%
65-74	437,267	29,099	227,971	31,952	118,848	29,397
	100%	6.7%	52.1%	7.3%	27.2%	6.7%
75+	234,290	16,178	77,701	13,323	117,709	9,379
	100%	6.9%	33.2%	5.7%	50.2%	4.0%

[1] Persons of Spanish Origin may be of any race.

Note: Due to rounding error, percentages may not add up to 100.0%

Source: U. S. Bureau of the Census. Marital Status and Living Arrangements: March 1980. U. S. Government Printing Office, 1981, Series P-20, N365, pp. 7-9.

An increasing number of elderly persons, here defined as individuals 65 years of age and over, are now living alone. Thirty-two percent (32.3%) of the majority culture, and thirty-three percent (33%) of the black elderly, in this group, are living alone or with someone other than a relative. Fewer persons of Hispanic decent are living alone with three-quarters (75%) living in a family setting. In each group (see Table 5), more women than men lived alone.

Family members provide the majority of care to those individuals with dementia or related disorders. As stated previously many of the elderly are residing in geographic areas where they may or may not have adequate informal supports. More than half of the black elderly do not live with their spouse who are often the primary caregiver. This has implications for who provides the care necessary to maintain the older individual. More Hispanics live with their families, but the question here is how long can family caregivers maintain the older individual without additional support.

Table 5.

Living Arrangements of Whites, Blacks and Persons of Spanish Origin, 65+ by Sex: 1980

(Numbers in Thousands)

	White	Black	Spanish Origin
Total	21,436	2,018	563
Percent	100.0	100.0	100.0
Living in Families:			
Total	14,508	1,351	422
Male	34.4%	31.5%	36.9%
Female	33.3%	35.5%	38.0%
Living Alone or With Nonrelatives			
Total	6,928	667	141
Male	6.6%	10.5%	9.1%
Female	25.7%	22.5%	16.0%

Note: Due to rounding error, percentages may not add up to 100.0%.

Source: U. S. Bureau of the Census, Marital Status and Living Arrangements, March 1980. Series P-20, No. 365, 1981, p. 13-14.

6. Economic Status

According to U. S. Senate Special Committee on Aging (1985)

> black and Hispanic elderly have substantially lower money incomes than their white counterparts. In 1983, the median income of white men age 65 and older was almost twice that of elderly black and Hispanic men....Among women, the differences were less pronounced.

In 1980, the official poverty threshold for persons 65 years of age and older was $4,954 for a married couple and $3,941 for a person living alone (U.S. Select Committee of Aging, 1982). For persons living on farms, the poverty level was even lower. Table 6 presents poverty by race and sex for persons 65 years of age and older in 1980. The statistics indicate that poverty is heavily concentrated among minorities and women. More than 38 percent of the black population were living in poverty. This percentage is nearly three times that of the general population elderly (13.6%). Elderly persons of Hispanic decent are also heavily concentrated (30.8%) in the poverty level of our society. The poorest of all elderly groups are black women who are three times (30.8%) more likely to be in poverty than women of the majority culture. Women of Hispanic decent are second with more than one-third (34.4%) living in poverty.

For the male population the percentages are lower with 31.5 percent of blacks, 26.8 percent of persons of Hispanic decent, and 9 percent of the general population elderly living below poverty. (see Table 6).

Table 6

Poverty by Race and Sex for Persons 65 or Older in 1980
(In Thousands)

	All Races		White		Black		Spanish Origin	
	Poor	%	Poor	%	Poor	%	Poor	%
Both Sexes	3,871	15.7	3,042	13.6	783	38.1	179	30.8
Male	1,102	10.9	820	9.0	261	31.5	75	26.8
Female	2,769	19.0	2,222	16.8	521	42.6	104	34.4

Source: Affeldt, D. "Fact Sheet on Poverty Among Older Blacks (65 or Older)." Quarterly Contact 4 (Summer 1981): 6.

Original Source: "Money, Income and Poverty Status of Families and Persons in the United States: 1980," U. S. Department of Commerce, Bureau of the Census, August 1981, pp. 29, 23.

There is a noticeable difference in sources of income for the different ethnic groups. The most frequent source of income for all, three racial/ethnic categories is Social Security (Manuel and Berk, 1983). Thirty-six (36%) percent of the majority culture 65 years of age and over had additional income from savings, compared to only 5 percent for both blacks and Hispanics in the same age group. Pensions were the third source of income for both the majority culture (34%) and black (19%) elderly. The second source of income for both the black and Hispanic elderly was the Supplemental Security Income (SSI). As opposed to 5 percent of the general population elderly, twenty-two percent of the black and twenty-five percent of the Hispanic elderly received or the SSI. For the Hispanic elderly, the third source of income (11%) were from their families. Fewer blacks (8%) and even fewer whites (4%) cited their families as providers of income (Manuel and Berk, 1983). Initial implication is that lower income equals lower access to resources and additional stress for the caretakers of the demented ethnic minority elderly.

D. Similarities and Differences

There are serious gaps in the data base that pertains to the minority elderly. This void makes it difficult to present accurate comparisons of the similarities and differences between and within the ethnic minority elderly groups. Information presented in this section focuses on selected socio-demographic characteristics of the ethnic minority elderly and some beginning consideration of the implications of the data related to the dementias. The data indicates that the fastest growing segment of the total elderly population are those individuals 75 years of age and older, women, and ethnic minority elderly. They are also the same groups which are more apt to suffer from poverty, social isolation and poor health. Each group varies in terms of size, life expectancy, geographical distribution, household composition, marital status and income. Cultural identification is best and most clearly represented by ethnic group membership. Existing data substantiates a lifelong pattern of underclass status for the ethnic minority elderly groups. Since the elderly do maintain their lifelong subgroup identities, it can be concluded that socio-economic status, culture, communicative skills, physical and financial factors are likely to have an impact on the similarities and differences between and within the ethnic minority elderly subgroups. The vulnerabilities and the strengths resulting from shared experiences have led to both positive and negative consequences for the mental health status of the minority elderly. To cope with these and other problems it would appear that ethnic minorities will require more varied and increased services in the future. Gurland (1978) suggests that

> sociocultural factors are highly correlated with dementia and that disadvantaged groups have a higher rate than upper socioecomic groups. He hypothesizes that differences in rates of exposure to occupational hazards, life stresses, or diagnostic procedures might account for the higher rates of dementia....(Cuellar, I., 1981).

This section will also lead to two major recommendations: (1) epidemiological data pertaining to the ethnic minority elderly; and, (2) varied services.

II.

A. Family Structure and Social Networks in Each Minority Group

The purpose of this section is to highlight the literature and research most relevant in answering questions pertaining to the typical family structure and social network of the ethnic minority elderly. This information may have some bearing on how ethnic minority elderly with dementia or related disorders may be cared for. Each family develops as the product of its varied experiences. Mindel (1980), after examining black, Mexican-American and the general elderly population extended families in a midwestern metropolitan inner-city, found that there is no one ideal "American family system."

For the elderly in this society, the family continues to be a primary source of both expressive and instrumental support. Expressive support entails providing such things as companionship, love, understanding and other meaningful aspects of emotional assistance. Instrumental support includes more concrete types of services such as housekeeping, transportation, food, gifts, and money.

A major debate exists between researchers who speak up for strong familial ties as a result of ethnicity or culture versus those researchers who assert that strong familial ties are a result of socio-economic factors (Jackson, 1973; Cantor, 1979; Seelbach, 1978). To date, most of the information that has attempted to support or disprove either argument has usually been conducted with samples primarily from lower socio-economic status levels and urban areas. As mentioned earlier, there are a significant proportion of ethnic minority elderly in the lower socio-economic level of our society. This group also tends to be in poorer health than the more affluent segments of the population. It is therefore not surprising to find many of the ethnic minority elderly more dependent upon instrumental and expressive support from family members and other informal systems.

The literature is replete with examples of the ethnic minority elderly's (Blacks and Hispanics in particular) proclivity towards large and cohesive family support systems. These extended families contribute a considerable amount of physical assistance, entertainment and emotional support to their members. Such information sustains a long standing assumption predicated on the tendency of ethnic minority patterns of interaction in large extended families which assures these groups of more extensive informal social supports. There are indications that earlier assumptions about the ethnic minority elderly family may be too simplistic.

Issues around concepts such as family cohesion, quality of support, network density and caregiving burden or strain are often omitted in discussions referring to the ethnic minority elderly and their informal support systems. In fact, a frequent point of contention pertaining to ethnic minority families centers upon those factors which nurture strong family support systems for the elderly. However, just because there is a tendency toward high social density, that is, a large family or informal support network among the ethnic minority elderly groups, this is not an accurate indication of the quality of the informal support system.

Little recognition has been given to the possibility that the existing family support system which is assumed to relieve strain, may in reality actually be the cause of strain. For example, "Ill health and the resultant need for care may also strain informal care providers to the point that they can no longer offer continued support" (Robinson, 1983).

There is reason to believe that the more contact or care an older person requires from family members, the more likely they are to experience role reversal. Role reversal fosters feelings of resentment by family caregivers, many of whom are younger. This in turn increases the potential for "role strain" or the psychological distress of those involved, along with the possibility of further isolation of the older person (Robinson, 1983).

In looking at specific consequences of social network interactions among Hispanics and the possible impact on their mental health, Valle and Bensussen (1985) found that Hispanics

> may be rich in expressive support but still be deficient in the material/brokering/problem solving/appraisal assistance that would transcend environmental barriers. [and]...where we find higher levels of instrumental support--we find a lower risk profile with regard to specific mental health outcomes such as depressive symptomatology and anxiety.

It is critical that socioeconomic variables not be indiscriminately confused with ethnic and cultural values. As reported above, a large extended family does not guarantee adequate social supports for the ethnic minority elderly. This should clarify some obvious contradictions found in the following discussion of existing literature.

A more recent study (Mutran 1985), comprised of a large national sample of blacks, found that black families seem to be more involved in intergenerational support activities, and more likely than the general population to treat the older person with respect. Solomon (1978) in her summation of patterns of the black elderly's family life suggests that it

> seems safe to say that on the basis of existing information on family relationships of black elderly, there are many low-income black elderly in tightly woven, extended family networks; there are low income black elderly who are rarely disaggregated in the analysis of data on black elderly that we have little knowledge other than speculation in regard to family relationships in the subgroup of black elderly.

For the Hispanic elderly, a review of the available information notes that, "there are no published participant observation ethnographic studies describing the long term interactions of older persons with their kin, service providers, and significant others" (Aguirre and Bigelow, 1983). Most of the studies done to date, focus primarily upon the Mexican-American elderly.

However, the Spanish influence on families within the Hispanic subcultures contributes to similiar although not identical familial characteristics. For example, the Hispanic family has strong bonds and patterns of frequent interaction that are extremely important to its members. There is a deep sense of family obligation to the extent that as in the Chicano subculture "the needs of the family unit supersede those of the individual" (Maldonado, 1979). Other traits identified by Maldonado (1979), are "the practice of mutual aid within the family", which for the elderly means they can expect their family to assist them in their later years, hold them in high esteem and treat them with respect. Finally, culturally defined roles with men having the position of authority and women that of subordination are also maintained.

American Indians are composed of many tribes whose cultures have traditionally emphasized the value of the extended family. The elderly are respected for their wisdom, experience and knowledge of tribal customs and history. The elder's role is that of teachers and caretakers of the young. Within this frame of reference American Indian elders were also held in high esteem and taken care of by the extended family network (National Indian Council on Aging, 1981).

The Asian American/Pan Asians are a diverse population with many subcultural differences. Regardless of their ethnic group, earlier circumstances, such as restrictive immigration laws, have weakened familial support systems for many of the elderly in their later years. The traditional Japanese culture, based on Confucian ideologies, stress filial piety and respect for the older person. Unlike the cultural expectations of the dominant society, Japanese elders are more likely to accept "a state of dependency and reduced authority without the loss of self-esteem" (Osako, 1979).

The Chinese culture is not too unlike the Japanese culture in terms of respect for, and treatment of their elderly. Unfortunately, due to past immigration restrictions on the Chinese, a significant number of elderly Chinese men, many of whom are bachelors, have lived in isolation in inner cities or "Chinatowns" without the traditional familial supports in their later years. This can be attributed to legislation such as the Chinese Exclusion Act of 1882, which imposed comprehensive restrictions on the immigration of this group. Male laborers already in this country were not allowed to send for their wives and families or potential brides. This isolation was compounded further by the anti-miscegenation laws (1906-1948), which prohibited mixed marriages. Because of this the Chinese tend to be the one ethnic minority elderly group that is more likely to turn to informal supports outside of the family in times of needs (Weeks and Cuellar, 1981).

Again, there is no typical family structure and social network within in each of the ethnic minority groups. All groups are composed of distinct individuals. In fact, there is growing evidence of uncertainty and change. "Increased out-group marriages, mobility, suburbanization, the economy, social policies and immigration patterns are only a few of the factors modifying traditional family ties, roles, and heretofore ethnic-specific community supports" (Lockery, 1985). Accurate assessment of informal support systems is crucial for the development of appropriate policies and programs to meet the needs of the ethnic minority elderly experiencing later life dementias.

B. Informal Caregiving

Informal family and non-familial support system networks are especially important and applicable in the maintenance of the ethnic minority elderly with dementia or related disorders in the community.

1. Affect of Family Structure on the Provision of Informal Care.

It has been hypothesized that, older people seem to have a hierarchy of preferences in terms of support resources (Shanas, 1979; Cantor, 1979). Initially, help is solicited from a favorite source. When and if this preferred source of help is not able or available, to assist the individual in need, alternate sources of help are utilized. The usual order of preference is the nuclear family (husband/wife and children) which is perceived as the most fitting source of assistance, followed by informal supports, such as members of the extended family, friends and neighbors, and lastly, formal support systems.

Using this frame of reference to systematically analyze the Black elderly's support network (Chatters, et al 1985) with data from a national sample of black Americans found that:

1. the support network of older persons with children tended to be comprised of the immediate family,
2. persons without a spouse and children were likely to have a less obligated and smaller support group,
3. the elderly without immediate family, reached out to more informal supports of

distant relatives or friends and neighbors,

4. sex was found to be a significant factor in the number of available informal supports, with women having a larger network size,
5. regional differences were noted in that the elderly in the South had a larger pool of informal supports than those respondents from other parts of the country (This was attributed in part to this groups expanded use of the extended family and friends and neighbors.) and,
6. health problems, did not impact the size or make-up of the informal support network.

These findings are consistent with much of the available data pertaining to the other minority elderly groups.

In times of crises, the majority of the Hispanic elderly utilize their primary family network to assist them (Valle and Mendoza, 1978). The informal network is utilized as a linkage to more formal services and resources (Valle and Mendoza, 1978). More recently, there are indications that Hispanic elders are "less likely to turn to family members in times of need despite the fact that those who live alone have an average of four times more extended kin in the area than nonminority elders" (Weeks and Cuellar, 1981). Again, family members in close proximity does not insure the use or availability of informal supports for the minority elderly (Weeks and Cuellar, 1981; Cantor, 1979).

Cantor (1979) and her associates conducted a major study in New York City that included blacks and Hispanics predominantly of Puerto Rican descent. While the sample was composed of the urban poor and persons 60 years of age and over, several significant findings were disclosed about the informal support system of both groups. The Hispanic elderly were found to receive a greater amount and more diverse assistance from their children than either the black or nonminority population. This was attributed in part to the Hispanic family's value orientation of care and respect for the elder which had not yet been disrupted by the acculturation process. Further as stated by Cantor (1979)

> Black, Spanish-speaking, and other poor and working class families are more likely to have highly developed patterns of child-parent interaction arising out of economic and social necessity than is the case among more well-to-do elderly.

Weeks and Cuellar (1981) found that with the exception of the Chinese, Pacific Islanders and

Asians are more apt to turn to their families for assistance than any of the other minority or the general population elderly in their study.

Overall, the immediate and extended family network of the minority elderly particularly the American Indian, black, Chinese, Guamanian, Japanese, Latino, Pilipino, and Samoan elders, were found to be a major means of assistance in times of need (Valle, et al, 1978). In contrast, majority culture families tend to be somewhat more detached from their extended family than the ethnic minority elderly groups (Cantor, 1979; Mindel, 1980; Weeks and Cuellar, 1981).

According to Jackson (1980), family members responsible for the provision of care

> Within minority groups, women generally bear the greater responsibility for providing instrumental and affective aid for the aged. Very often when aged parents with both daughters and sons become ill, the eldest daughter is expected to be primarily responsible for providing needed care. When business matters need handling, on the other hand, sons are more likely called upon to perform such roles.

Patterns are beginning to emerge which demonstrate that there are multiple actors in the role of family caregivers with the ethnic minority elderly.

Without a doubt, the ethnic minority elderly support network plays a crucial role in the lives of its family members. For some, instead of serving as an alternate support system, the family assumes the role of providing supplementary assistance to their elderly members in need (Mindel and Wright, 1980).

Dukepoo (1980) has noted some differences in modes of assistance. Those elders on the reservation tended to depend only or primarily on the family in times of need, while those living off of the reservation tended to broaden their informal support network to formal support systems in an attempt to meet their needs.

Informal supports other than the family are significant to many of the minority groups. Friends and neighbors in a black community in Seattle supplemented the family with distinct and overlapping roles (Evans and Northwood, 1978). If children were not available, friends and neighbors provided socialization, companionship and assistance with minor crises (Cantor, 1979). Gallego (1980), in looking at the Mexican Americans elderly's informal support system in Utah, found that "Mexican-American family solidarity and reciprocity and friendship support systems are a myth." As such, the Mexican American elderly do not have access to the necessary and culturally preferred patterns of social interaction. This finding is supported by other researchers (Torres-Gil and Negm, 1980; Newton, 1980), who suggest that the once strong primary support network of the Hispanic elderly is beginning to deteriorate.

What may initially appear to be a contradiction in the literature describing the ethnic minority elderly family support systems is in reality a confirmation of the many inter- and intra-ethnic group differences. Much of this can be traced to such factors as socio-economic status, the level of need of the elderly, the number of children or family members, the extent of acculturation, length of time in this country, and the circumstances under which the group or the individual arrived in this country. This varies within and among each group.

An increase in the life expectancy of the minority elderly has contributed to the the rapid growth of this population. Within this expanding population comparable growth can be anticipated in the area of senile dementia and related disorders of the Alzheimer's type. "Senile dementia, which affects 5% to 10% of the older population, results in cognitive loss that generally leave the afflicted person in need of supportive care" (Zarit et al, 1980). Family members as the primary caregivers in the family support system of the ethnic minority elderly is important in any discussion about the utilization of both informal and formal resources for dementia or related disorders. Differences between and within each group cannot be overemphasized. Recognition of these differences should better delineate the influence of culture apart from that of socioeconomic status. In the development or the delivery of services to the ethnic minority elderly with dementia or related disorders focus must be on the individual not just earlier assumptions about the family structure and patterns of familial support.

The following section will highlight the value and importance of the community structure in caring for the ethnic minority elderly.

C. Community Structure

1. Affect of Community Structure on Caregiving for Demented Individuals.

Ethnic minorities, because of sociocultural and economic factors, tend to live in a particular geographical enclave. For the ethnic minority elderly of color, their restriction to specific neighborhoods were mandated through discrimination practices and institutional racism. Both systems eliminated the free choice experienced by groups such as the Germans or Scandinavians who were able to remain in their ethnic neighborhoods or move out into other parts of the community. Residential clustering, has served as a cushion to protect its members from discrimination and the less familiar sociocultural patterns of the larger society. The range of informal community supports and the amount and type of cohesiveness varies from neighborhood to neighborhood. Most communities do have some type of ethnic specific support system composed of individuals or groups which attempt to address the needs of its members.

From an historical perspective, earlier negative experiences of Pacific/Asian immigrants served to intensify the "immigrants" cultural value of group behavior and the creation and maintenance of ethnic communities which became sanctuaries for physical, emotional, social and economic survival.

For example, the Japanese community became a primary vehicle for maintaining shared cultural values, socialization, and self-esteem. A common purpose of the Japanese community is to provide familial support. Relatives and friends are within close proximity.

There are other culturally specific informal community supports, such as community centers which serve as the hub for activities, cultural events, language classes, and services (Kobata, 1979). In addition, as described by Kamikawa (1981), there are "family associations, district associations, credit associations, mutual aid and/or benevolent societies, social/recreational clubs, and a variety of community caretakers and caregivers, such as religious leaders, village headmen, elders, herbalists and practitioners of traditional folk medicine." The natural support system serves as a significant part of the Pacific/Asian community.

The importance of informal community supports is of major consequence to other minority groups who also have lived through earlier oppressive experiences in this country. For example, in the Hispanic community, servidores or natural helpers within the community have been identified. Servidores literally means "helpers who help, because they have the sincere desire to help and not for political or monetary gain" (Mendoza, 1981). These individuals are part of a Servidor System which complements more formal human service organizations. Servidores assume "supportive and caretaking roles to help the older person remain and participate in the community" (Mendoza, 1979). This is accomplished by serving as the connecting link between the older Hispanic person in need and either a formal human service organization or other more appropriate natural helpers in the community (Valle and Mendoza, 1978).

Servidores can be delineated by their special roles. First there are the "servidores comunicativos" or the community service brokers, who act as agents and linkages to the use of existing services and resources by way of information and referral, and crisis or emergency assistance. Next, there are "la vecina" or the neighbor, the person who identifies the individual in need or the person that the individual having the problem will seek out. The neighbor usually has a good idea of the appropriate contact for the necessary assistance. The last level of the helping system is composed of "el servidor de agencia" or the agency link person, who are inclined to bestow services in a manner that is culturally relevant to the Hispanic population (Valle and Mendoza, 1979).

Through the years, as a result of inordinate needs and the exclusion of minorities from the more traditional support systems, the black community has had to generate an assortment of social and psychological programs to address their needs (Solomon, 1978). In support of this, Rathbone-McCuan and Hashimi (1982) in reference to the work of Staples (1976), found that

> Programs offered through the churches promote a strong sense of family life as a vehicle for mediating conflict. The church as an important social organization also confers status, provides for leadership development, offers a forum for advocacy for the black community, and creates opportunities for release of tension and for social-recreational activities.

Within this framework, the church is extremely important and has created opportunities and services that otherwise would not have been available to the minority elderly in the larger society.

The ethnic minority community structure has a significant impact on the elderly. In a more complete ethnic community where there is likely to be a wide range of both formal and informal services and resources the elderly are more likely to develop and maintain social relationships that have a positive effect on their well-being.

This partially can be attributed to services and resources being more "culturally accessible" and "responsive" to the needs of the minority elderly. For example, a community agency in San Diego was awarded a contract by the Area Agency on Aging (AAA) to run a home helps program for Asian American/Pan Asian elderly. To accomodate the needs of these ethnic groups and to make the program culturally relevant the Director of the agency had to insist upon certain program modifications. One modification was the requirement that the program hire active seniors 50 years of age or older with their own transportation because the project could only find qualified adult workers in their 30's and 40's. The program benefited since the elderly groups involved related well with younger individuals--those who are suppose to care for them in their later years. This issue was highlighted further by the fact that the one older employee was never fully utilized. In keeping with their culture the client's adhered to the belief that the old, out of respect, were to be attended to by younger people. Thus, program participants felt it would be disrespectful to ask or permit someone in their later years do menial tasks (even light housework or shopping) for others (Yip, 1977). Accessibility and responsiveness as illustrated in the previous example leads to the increased utilization of services by the ethnic minority elderly (Aquirre, B.E. & A. Bigelow, 1983).

Other research (Holmes, et al, 1979) focused on the utilization of community services by the four ethnic minority elderly groups. The findings suggest that the older minority person is less likely to receive adequate services in racially diversified communities, with smaller proportions of minority elderly.

2. Impact of Community Structure on Informal Caregiving by Non-Relatives

The minority community structure encourages informal caregiving by non-relatives in a variety of ways.

> Historically, minority aged were usually excluded or served poorly by most social programs. Thus, unlike their non-Hispanic white counterparts, minority families were responsible for their aged, including many of their economic and health needs...among those aged minorities without English fluency, the aid of kin fluent in English was needed to enter and exit from the bureaucratic systems...(Jackson, 1980).

In most neighborhoods there is a core of individuals who join together to assist each other in whatever way they can. One good example is the previously mentioned servidor or natural support system in the Hispanic community. Within this framework there are individuals in the community who "operate as catalysts and links to the utilization of services and resources...these individuals [have] a great capacity for information and referral activity along with crisis or emergency assistance" (Valle and Mendoza, 1978). The servidores who were not in the position to actually deliver direct services, did act in a variety of capacities, i.e., translations, information and referrals, transportation, cultural interpreters, advocates and volunteers in existing agencies (Valle and Mendoza, 1978).

3. Type of Care Usually Provided

How supportive ethnic communities are and how supportive they will continue to be in the future raises questions in light of the trend towards increased mobility and economic independence of the younger generations. Although community support and identity varies within each ethnic community or neighborhood, to simply live around individuals who resembles oneself in appearance and language, is still important to the ethnic minority elderly.

Little has been done to accurately assess the past and current life situations and needs of the ethnic minority elderly with dementias or related disorders. Such data is needed to assist with the development of accurate policy measures that address programs in which strategies and resources can be developed to identify and assist with dementias and related disorders among the rapidly growing ethnic minority elderly population.

Community support systems indigeneous to the ethnic minority groups such as those mentioned in the Japanese community, the black church, and the Hispanic servidores system are natural vehicles for identifying or getting services to older persons in need of care (social, mental and physical) and to support family caregivers. Beyond identifying problems the servidores as a more natural resources could provide culturally relevant information and referral services in the community. These same systems could serve as a means for reaching out to and supporting existing family caregivers or informal support systems of elderly persons with dementia or related disorders.

D. Utilization of Formal Health and Social Services

1. Health Care Utilization

The value of health care as a right is generally accepted in today's society. In spite of this, major barriers such as transportation, lack of health education, lack of personal physicians, lack of financial resources, unavailability of services, discrimination, folk orientation to medical care, social distance from health professionals, and bureaucratic procedures impede a person's selection and utilization of health care services.

Information pertaining to the utilization of health services by various populations is beginning to emerge in the literature. Little of the data specifically addresses the aged in general, and the minority aged in particular. Unstable relationships with physicians, beliefs in attitudes in regard to the vulnerability and effectiveness of treatment are significant contributors to the utilization or non-utilization of health services. These issues have major implications for a large segment of the population which is more apt to have a greater need for a continuum of interrelated health and social services for the enhancement of their physical and psychosocial functioning.

A great many socio-demographic variables influence the formal service utilization patterns of the ethnic minority elderly. One major factor is the elderly's informal support network. With more formal services, such as health and mental health care, little is known about which elements effect service utilization. However, even in the absence of epidemiological data on Alzheimer's disease in general and minorities in particular, we can say that earlier patterns of service utilization are apt to be continued into the later years. The ethnic minority elderly's lifelong pattern of episodic relationships to health and human services sets the basis for poor diagnosis and treatment of health problems and dementias in later life.

In the past, the ethnic minority elderly were either excluded from existing programs or given inferior services. These problems were compounded for members of non-English speaking groups, who because of a language barrier, had even less access to the more traditional public programs.

The literature clearly demonstrates a recognition of racial and ethnic group variations in the use of services by the elderly (Tamex and Hyslin, 1980; Fujii, 1976; Stanford, 1978; McCaslin and Calvert, 1975; Valle and Mendoza, 1978; Cuellar and Weeks, 1980; Cantor, 1979; Guttman, 1979). Bell, et al. (1976), substantitated this further by acknowledging that "cultural differences are critically important in affecting the use of facilities and governmental programs." A basic premise underlying the service utilization patterns of the minority elderly is that in proportion to their need this population does not receive an equitable share of available services. This is further compounded by the growing number of ethnic minority elderly in the population and their lifelong pattern of episodic use of formal services. This would suggest that the ethnic minority elderly will surface with more advanced symptoms of chronic brain syndrome and related disorders. As a result, "the already burdened minority group natural supports will find themselves even further strained to provide assistance without clear indication as to how to access services" (Valle, 1981).

In a review of issues pertaining to availability and accessibility, the literature shows that minority elderly are less likely to have equal access to health care providers and facilities. Berk and Bernstein (1982), in their study of differences between the majority culture and ethnic minority elderly populations regular source of care, examined 1354 minority elderly respondents. Of these, 77 percent were black, 17 percent were Hispanic, and 6 percent from other ethnic groups. Major differences were noted between the ethnic minority and the general population elderly's regular sources of health care. First, there are qualitative differences in the scope of services available to the ethnic minority and the general population elderly. Further,

> The nonwhite elderly are more likely than the white elderly to receive care in an institutional setting rather than a physician's office. Moreover, the white elderly are more likely than the nonwhite elderly to have a regular source of care that provides house calls and emergency services (Berk and Bernstein, 1982).

Among elderly black city dwellers, equal access to services is negatively influenced by: 1) a lack of black physicians, and 2) an inadequate number of black physicians to practice in the black community (Bell, et al, 1976). This partially explains the high utilization of clinics and emergency rooms by the black elderly. The primary source of both medical and mental health services by the black elderly is the emergency room. The close proximity, visibility, twenty-four hour availability, and the partial reimbursement of costs by the Federal health programs are some of the reasons given for the high use of emergency rooms by the black elderly (Wilson and Simson, 1983). For the black elderly who received health care in these settings, their diagnoses were generally not true medical emergencies. They were more likely to be hospitalized than a comparable group of general population elderly (Wilson and Simson, 1983). Emergency services are fragmented and oftentimes perpetuate inadequate health care for those who use it. The absence of private insurance among this group diminishes even further their capacity to purchase health services, since many are unable to pay the Medicare deductibles or co-insurance fees. For those with Medicaid, services are limited by the number of physicians that will even accept them as patients (Bell et al, 1976).

A national study (Lacayo, 1980) on the Hispanic elderly found that Mexican-Americans, Cubans and other Hispanics usually obtain their medical care and services at a doctor's office. In contrast, Puerto Ricans are more apt to turn to public health care facilities. A greater percentage of Puerto Ricans (46.2 percent) as opposed to the other Hispanic subgroups, were dependent upon Medicaid. Mexican-American elderly are least likely to have any any health insurance coverage. For each of the Hispanic subgroups, the greatest barrier to the use of physician services when needed was "money" (Lacayo, 1980).

More recently, Lopez-Aqueres, et al, (1984) studied health care utilization patterns of older Hispanics (primarily of Mexican descent) and found that during the previous year nearly 80 (79.4%) percent of the respondents had seen a doctor at least once. The majority (83.5%) of the elderly who had seen a physician during the year, had seen a general practitioner as opposed to a specialist. For nearly half of the participants (49.9%) their source of care was provided by a private physician (Lopez-Aqueres, et al, 1984).

Other cross-cultural studies which specifically addressed the equitable receipt and use of services by the ethnic minority elderly were conducted in 1979 and 1980. The initial research effort was undertaken in Washington, D.C., with a sample of six hundred and twenty-one (621) persons between the ages of 55 to 97. The final sample included: 193 Black, 250 non-minority, 66 Hispanics and 112 Asians. The research determined that although the minority elderly tended to be most in need of and dependent upon public services, their awareness and use of the services were lower than the non-minority (Guttman, 1980). Therefore, in answer to the original research question, the minority elderly do not receive an equitable share of the public benefits (Guttman, 1980).

During the same time that the Washington study was underway, a comparable research effort was taking place in the San Diego area. Again, the general purpose was to determine whether or not the minority elderly were receiving an equitable share of public benefits. Unlike the Washington study, this effort included nine specific minority groups. The total number of respondents was 1,139, at age 55 years or above (Cuellar and Weeks, 1980:25). The racial subdivisions were made up by the following: 235 Hispanic, 231 Black, 167 majority culture, 109 Japanese, 89 American Indians, 74 Pilipino, 65 Guamanian, 58 Samoan, 57 Chinese and 54 Koreans (Cuellar and Weeks, 1980:150). The statistical results of this survey confirmed the original premise that "minority elders are not receiving an equitable share of public benefits relative to their needs" (Cuellar and Weeks, 1980). Not only did the minority elderly have a need for more public services, they also had a need for services that were not identical to the non-minority population (Cuellar and Weeks, 1980). Inevitably, when the minority elderly were aware of exisitng governmental programs they tended to use them more than the general population elderly (Cuellar and Weeks, 1980).

Another study concentrated on health care services in the Los Angeles area and addressed the research question, "Is there equity in the provision of health care to older adults in this country?" (Newquist et al., 1979). As with the previous studies (Guttman, 1980; Cuellar and Weeks, 1980), the answer was once again "no." It was found that elderly blacks and Mexican Americans usually incur more problems than the general population elderly in obtaining admittance to health care providers, in attaining services that were in keeping with the behavior they anticipated from the service providers, and in having adequate funds to purchase the necessary services. Newquist, et al (1979) concluded that even though elderly blacks and Mexican Americans experience poorer health than comparable groups of the general population elderly, the ethnic minority elderly were less likely to utilize more health care services.

Most health care services are not geared to serving groups with cultural differences including differences of language. This in addition to ethnic perceptions and beliefs can lead to major difficulties in the diagnosis of Alzheimer's disease and related disorders among the ethnic minority elderly. Lifelong status as underclass populations has perpetuated the ethnic minority elderly's episodic or sporadic utilization of health and human services. As a result, many ethnic minority elderly continue to use clinics and emergency rooms which increases the chances of fragmented and oftentimes inadequate health care. The likelihood that the dementias and related disorders will be overlooked is increased.

Culturally and linguistically sensitive screening and instrumentation, and diagnostic clinical procedures are of major importance in the identification of Alzheimer's disease and related disorders. When examining the mental health status of the ethnic minority elderly,

> the pratitioner must examine the total person--not only his current presenting problem, but his life situation, his social and personal world, his values, and his life memories (Kobata, Lockery and Moriwaki, 1980)

2. Long-Term Care

Data pertaining to the minority elderly and their use of long-term care facilities indicates that individuals living alone or in nonfamily settings are more prone to institutionalization. When the minority elderly are admitted to a nursing home the primary reason is related to the rapid loss of physical health along with the families inability to provide the necessary care to maintain the individual in the home (Morrison, 1983). The actual experiences of the ethnic minority elderly in the long-term care system poses many questions. Yet statistics available on the admission rates and the number of ethnic minority elderly in skilled nursing facilities is limited.

The most recent available data is from the 1974 Minority Health Chartbook, which shows that few of the nursing homes in this country have minority residents (Morrison, 1983). Only "Forty-two percent reported serving aged blacks, 23.5% had Spanish-surnamed residents, 9% served aged Asian-Americans and 8% had aged American Indians" (Morrison, 1983).

Underutilization can be explained by several factors (Morrison, 1983). According to the "cultural aversion" hypothesis, "the ethnic minority prefer to take care of their own" and therefore have an aversion to institutionalizing their elderly. This hypothesis gives the impression that the minority elderly have the necessary informal supports and resources to adequately meet their needs. The reality of the statement is probably based on past experiences of the various ethnic minority groups in this country. These groups were either excluded from existing programs or given inferior services by those programs available to them. Non-English speaking groups because of a language barrier had even less access to the more traditional public programs. This does not deny that the ethnic minority family does has a strong cultural commitment to take care of their own. However, it should be recognized that not all of the aged minority group members have strong family support systems. For some, there is no extended family support system or the existing family structure is not that supportive. The assumption of strong family support has been used by members of the larger society, policymakers, and service providers to justify the underutilization of services by the ethnic minority in proportion to their needs. By assuming that the minority elderly are not in need of social services, the groups may be deprived of needed services (Jackson, 1980; Lacayo, 1980).

Another factor explaining underutilization is the geographic location of the long-term care facility. Location is important because the ethnic minority elderly and their families are more receptive to institutional placements that are culturally relevant and located within their own community. For example, in a small pilot study (Chee and Kane, R., 1983) which explored the significance of specific ethnic elements in the placement of black and Japanese-Americans in nursing home settings it was found that:

> For blacks, ethnic considerations do not seem to be a major factor in the choice of a nursing home...location [is]...primary concern...[family members] needed access. Japanese-Americans wanted a nursing home that accommodates Japanese patients.

In addition, ethnic specific programs and activities were given high priorly by both groups. Here again, church activities were of primary importance to the black residents. For the Japanese-Americans, their ethnic community involvement and support were crucial to the success of the nursing homes programs and services (Chee and Kane, R., 1983). This small limited study does provide insight into some of the possible culturally relevant differences among the ethnic minority in terms of nursing home utilization.

A third factor contributing to underutilization is the "lack of adequate information and referral services within hospitals and service agencies" (Morrison 1983). On the basis of existing research involving a significant proportion of the black elderly, Morrison (1983) found that when the hospitalized elderly are properly prepared through appropriate information and referrals they are more receptive to nursing home placements upon discharge.

Finally, economic status often means that ethnic minority families or individuals do not have the necessary funds for placement (Morrison, 1983).

To summarize, in reference to a qualitative study by the United States Senate Subcommittee on Long Term Care, Solomon (1982) concluded that those factors which best explain the absence of ethnic minority older persons in skilled nursing home facilities are:

> discrimination, cost, personal choice and cultural differences....the differential histories of the four minority groups-Asian Americans, blacks, American Indians and Mexican Americans-determined to a great extent the particular ordering of the importance of the four factors.

Thus, the primary reason ethnic minority elderly are not found in nursing homes varies among the groups. American Indian elderly will not utilize nursing homes because of social and cultural differences. Cost and discrimination are the most significant deterrents to black and Mexican American elderly. While for the Asian American/Pacific Asian elderly, language and sociocultural factors are the primary reasons for not utilizing skilled nursing facilities (Solomon. 1982). It is obvious that some demented ethnic minority elderly would be better served in "culturally supportive" skilled nursing facilities in the community. An example is the Keiro Nursing Homes which primarily serve the Japanese elderly in the Los Angeles area. Keiro provides "for the language, dietary, physical, and social adaptations," of the residents that "are all molded to Japanese ethnic and cultural habits" (Ito, 1975).

This is very important to this discussion since, the elderly generally are plagued by a variety of chronic illnesses. The prevalence of mental and physical disorders rise sharply with age. While there are few definitive statements, the incidence of chronic illness (cerebrovascular diseases, arteriosclerotic heart disease, diabetes, hypertension, osteoarthritis, organic brain syndrome, etc.) and mental disorders are higher for the minority elderly. This increased risk is due in part to a combination of social, economic, cultural and linguistic factors.

3. Beliefs and Attitudes that Affect Service Utilization

The southwestern Mexican Americans' underutilization of mental health programs are related to "cultural attitudes towards illness, roles in the family, and resistance to obtaining professional help in formal and impersonal Anglo institutions" (Galtz and Scott, 1974). For this same population, the relative responsibility clause in welfare-related programs serves as a further deterrent to the elderly's participation (Reynoso, 1972) . Finally, Salcido (1979) brought attention to the obstacle of illegal alien status.

Similar observations also have been made concerning barriers to service for the black elderly. The lack of awareness or knowledge of services is one of the most frequently cited reasons why the black elderly do not make use of programs (Solomon, 1978; Register, 1981). Others may be aware of a program but are so afraid of street crimes against the elderly they dare not venture out (Solomon, 1978). In the black sample from a San Diego study, more than one-fifth (20.8 percent) of the participants felt very strongly that

> agency personnel . . . should be more courteous, patient in their work and should have more knowledge of the needs of their clients . . .not nearly enough emphasis and attention [is] given to the culture of ethnic specific needs of the respondents (Stanford, 1978).

Finally, Guttman (1980) also found that cultural attitudes influence the minority elder's use of public services. Some of this was attributed to "the minority group's feelings of shyness. pride, insistence on self-reliance and fear of losing face within their own communities" (Guttman, 1980).

4. Barriers to Service Utilization

Barriers to the use of existing services are in part influenced by low socioeconomic status, cultural differences. languages, and eligibility criteria. In his final report, Guttman (1980) suggests that the greatest obstacles to the minority elderly's participation in public services and programs are:

> the lack of information, the lack of knowledge about a particular benefit and procedures in obtaining it. . .

Cuellar and Weeks (1980) found that the three most frequently selected public service barriers were the means test, the lack of availability in the respondent's local community, and the absence of senior involvement in the planning process. Later findings based on both quantitative and ethnographic data led Cuellar and Weeks (1980) to conclude that the major barriers for the minority elderly are:

- lack of information;
- lack of geographical mobility or transportation; and,
- lack of bilingual/bicultural communication skills on the part of both service providers and minority elders.

In the Los Angeles study, obstacles which impede minority access to health services are similar to those already mentioned. Included in this are:

> shortages of providers, physicians' refusal to accept Medicaid patients, government failure to enforce laws prohibiting discrimination, Social Security eligibility requirements for participation in Medicare, mobility problems, regional disparities in Medicaid eligibility and benefits, physicians' refusal to provide services on assignment through the Medicare programs, and difficulty using their (Mexican American) health insurance (Newquist et al., 1979).

Although the above inquiries into inequitable service utilization disclosed a wide array of service barriers, other efforts bear mentioning. For instance, in a comprehensive report (Valle,

1978) on the elderly Hispanic population, the following were found to be principal service barriers:

- the location of services or facilities outside of the elderly Hispanics' immediate neighborhoods,
- language and communication obstacles, which by implication also included the lack of bilingual staff,
- the planning, development, and implementation of services based on middle-class values of dominant society,
- age related eligibility criteria,
- the absence of knowledge about and, therefore, sensitivity to the Hispanic culture, and
- the lack of bicultural staff and services.

From this and other literature (Carp, 1969; Galtz and Scott, 1974; Bell et al, 1976; Valle and Mendoza, 1978; Salcido, 1979; and Gallego, 1980), communication appears to be one of the most commonly cited barriers to services. Many of the ethnic minority elderly use their native tongue as their principal language. This is significant since

> few doctors, nurses, social workers, or personnel of social agencies are bilingual, the language barrier has contributed greatly to misunderstanding and poor communication between clients and caregivers . . . (Galtz and Scott, 1974).

Lack of adequate transportation is a critical barrier to service access for the Pacific/Asian elderly. For example, lack of transportation was the most common reason for the elderly Pilipino patients not participating in the Pilipino health-care clinic (Constantino, 1979). In San Francisco's Chinatown, other researchers (Carp and Kataoka, 1976) reported that more than half (53 %) of their sample of elderly Chinese-American residents found it difficult to get to and from the doctor. Still others (Cuellar and Weeks, 1980) found that among the ethnic minority elderly (specifically, Samoans. Koreans. Chinese and Hispanics) transportation was the second most important barrier to medical care after cost.

Comprehensive data on the many Indian tribes is difficult to obtain. For those individuals living on or in close proximity to a federal Indian reservation or Alaskan Native village there is access to the Indian Health Services. Since approximately half of the total Indian population lives away from their reservations and native villages, however, they usually receive only emergency health care services. It has been found that, "When urban Indians do seek out health services, it is not uncommon for them to be refused service from public agencies because of the misconception that the IHS and BIA will take care of them" (National Indian Council on Aging, Inc., 1981).

5. Innovative Services or Service Delivery Systems Utilized Effectively with Minority Group Individuals and Families

One of the oldest and most successful innovative programs for the ethnic minority elderly is the previously mentioned Keiro Nursing Homes in Los Angeles. The success of the first home led to the development of a second nursing home in another community.

Those individuals working most closely with the residents (i.e., nurses aides, orderlies) are bicultural and bilingual making communication a minimum problem. Ethnic dietary patterns are taken into consideration and special foods are served on the appropriate holiday or occasion. Keiro grounds are modified and adapted in a way that emphasizes traditional Japanese gardens and plants. Social interaction is encouraged through group dining which also serves as a mechanism for facilitating physical activity among the residents. Community supports through the family, volunteers, churches and other ethnic organizations are a significant part of the program. For example, family members are expected to assist with the care of the resident by doing their laundry, being present at meal times to help feed those persons needing assistance, and to add meaning to the residents life (Ito, 1975).

Another program which serves the minority elderly in an innovative and meaningful way is On Lok. On Lok Senior Health Services is located in the Chinatown-North Beach-Polk area of San Francisco. During the last decade this community-based, non-profit organization has expanded their programs to the point that they are now able to provide a total continuum of long term care which sustains the frail elderly in the community. The majority (70%) of the participants are Chinese and a wide array of services are provided through the use of culturally specific, multi-disciplinary assessment and care teams (Yee, 1983). Among those services provided are:

Medical: Physician's examination and care, nursing, dentistry, optometry, audiology, podiatry, medications, laboratory work and x-rays.

Inpatient Care: Acute care, hospitalization and nursing home care.

Social: Counseling, advocacy and individual and group support.

Therapies: Physical, occupational and speech.

Meals: Regular or special diets, Chinese or Western, and nutritional counseling.

Recreation: Games, entertainment, crafts, exercise and outings.

General Support: Transportation, personal care and homemaking services.

Housing: Limited availability at On Lok House and communal living arrangements.

(Annual Report 1984-85)

On Lok's services are provided through a financial model which includes Medicare, Medicaid (MediCal) and the participant. It is the "only organization in the country to assume 100% risk to provide for the complete care of extremely frail older people" through fixed advanced capitation payments. The success of the program is attested to by its financial solvency, the fact that it is always full and once in the program few ever leave it.

Culturally relevant programs such as On Lok and Keiro are but two models which could successfully meet the needs of the various ethnic minority groups in the delivery of health and mental health services. Programs which emphasize cultural content and processes tend to maximize the psychological well being and social access of the ethnic minority elderly participants. Therefore, professional and lay persons working in health and human service facilities need to be aware of cultural norms of the various ethnic minority subgroups so that they will be better able to recognize symptoms of dementia and related disorders in a timely manner. This is especially true for those persons working in emergency rooms or community clinics. In long term care facilities the problem is not getting the ethnic minority elderly out, it is getting them in. Studies must be done to determine which elements contribute to cultural differences in the use of nursing homes and other community resources such as adult daycare and respite services. Minority groups not using existing services may need to be educated to do so in light of the potential increase in the number of ethnic minority older persons with late life dementias.

E. Ethnic Minority Attitudes Towards Dementia

1. Perceptions of Dementia

Information that contributes to a better understanding of the needs and utilization of mental health services by the minority elderly is sparse and even then, speculative and open to debate. Inferences can be made about select minority elderly subgroups but the void in the literature addressing late life dementias and the minority elderly almost demands appropriate research. It is a complex issue which no single explanation can address.

Indications are that the elderly tend to have a somewhat negative attitude toward mental health services and professionals. Some of this can be attributed to the stigma known to be attached to the use of mental health services and even more so to the fact that such services are not readily available to the elderly as a group. Persons from lower socioeconomic levels attempt to deny problems of mental health through the somatization of illnesses (Neighbors, 1984). Further, emotional conditions or unusual behavior may be tolerated in varying degrees by different socioeconomic or ethnic groups. What we do not know is exactly how the different ethnic minority elderly groups perceive dementia. Many of the ethnic minority elderly and their families continue to refer to dementia and related disorders as "senility" - something that comes with old age and about which nothing can be done.

In a Philadelphia study which included a significant number of blacks (45.5%), the elderly stated that they probably would not need to seek mental health services even if they were to experience psychiatric problems (Waxman, et al, 1984). A good percentage (two-thirds and one-fourth respectively) of the participants went on to say that in all probability, they would not seek professional assistance for depression or symptoms related to organic brain syndrome. Conversely, when it came to physical ailments, more than 70 percent of the participants would seek out a medical doctor for care or assistance.

In Los Angeles County, some of the Hispanic elderly were found to have symptoms of "cognitive impairment (13.8%), and depression/demoralization (30.8%)" (Lopez-Aqueres, et al, 1984). Nearly 8 percent of the same group was on prescribed medications for insomnia and another 6 percent was taking medications for "other mental or emotional problems". However, there were no indications that the participants had sought the help of any type of mental health professional. What was clearly demonstrated was that the clients' regular doctor assumed the role of both physical and mental health practitioner.

Lopez-Aqueres and his associates (1984), contend "that Hispanics turn to private doctors other than mental health specialists for their psychological problems." In support of this, the National Association for Hispanic Elderly (Lacayo, 1980) conducted a national survey which looked at several variables that might be indicative of mental health status and help seeking behavior of the Hispanic elderly. One aspect was to look at the patterns of assistance sought by the elderly Hispanic in dealing with serious family problems. For the most part, the group tended to resolve their own personal problems (Lacayo, 1980). However, when external intervention was needed it was likely to come from a relative, a spouse, or the church. Subgroup differences showed that Puerto Ricans, unlike Mexican Americans, Cubans, and other Hispanics, relied on self or friends more so than relatives for assistance. Thus, more formal service providers are usually avoided.

Mental health as experienced by each of the groups during the previous year was also indicated by bouts of depression. In this category 56 percent of the Cubans, 48 percent Other Hispanics, 45 percent Puerto Ricans, and 35 percent Mexican Americans acknowledged having had such experiences.

Although more than half of the Cubans had periods of depression during the year, they were least likely to have someone to turn to for assistance. Because of this if and when the Cuban elderly did seek help it was likely to be from a doctor. The findings indicate that, "Across subgroups, relatives help most often, with the church figuring second most important, and a friend ranks third as a source of help with depression" (Lacayo, 1980). Out of 1,804 respondents, only one individual acknowledged receiving help from a mental health professional, which happened to be a psychologist.

The purpose of this paper was to highlight issues pertaining to dementia and related disorders among the ethnic minority elderly. Review of the literature pointed to an absence of data which specifically addresses these groups. Thus, this paper has attempted to look at demographic factors; key concepts, such as the diversity and changing patterns of family caregiving and community structures among the ethnic minority elderly; and cross-cultural health, mental health and service utilization patterns. Implications were drawn and alluded to throughout the paper. These along with additional recommendations have been highlighted in the final section.

A. Conclusions

Before any conclusive statements can be made, further study and research must deal with the myriad of issues surrounding the impact and relationship of dementia and related disorders on the ethnic minority elderly. The following conclusions have been drawn to summarize the issues disclosed in this paper.

1. Priority Issues

- In both research and program development recognition must be given to the heterogeneity within and between each of the ethnic minority elderly groups.
- Must focus on needs of individual-not just earlier assumptions about the ethnic minority family structure and patterns of familial support.
- Should develop research policy which addresses issues that affect the ethnic minority elderly, and their use of the natural support system.
- Need to look at the quality of the natural support systems interactions instead of the quantity. When is the family of the ethnic minority elderly, "overburdened" or "what is too much?"
- Development of culturally sensitive programs utilizing existing community resources for identifying or getting services to older persons

in need of care (social, mental and physical) and the support of the family caregivers.

* Studies must be initiated that determine which factors contribute to cultural differences in the use of nursing homes and other community resources such as adult daycare and respite services.
* Need for training of professionals and laypersons working with these populations so that they will be better able to identify early symptoms of the dementias and related disorders.

2. Limitations of Data

* Much of the available statistical and health care data is still broken down by ethnic subgroups.
* Global groupings of ethnic minorities into categories such as, white, blacks and others results in a considerable loss of information.
* United States Census figures are still prone to errors on the number of ethnic minority elderly.
* Data continues to confuse constructs of race and ethnicity and the incisive division of age categories.
* In the case of the ethnic minority elderly the literature and research base on dementia and related disorders are weak. More specifically, little is known about the incidence, prevalence,

or rates of service utilization for these disorders.

- * There is a lack of clear evidence in the literature about indicators of Alzheimer's and related disorders with regard to the ethnic minority elderly.

3. Needs

- * To better guide policies in the dementias and related disorders for the minority elderly, more data is needed on:
  - the relative incidence of specific disorders in all of the ethnic minority elderly groups.
  - differential perceptions of dementia and related disorders among the ethnic minority elderly.
  - Access to existing mental health services according to type, age and ethnic breakdown.
  - Issues around concepts such as family cohesion, quality of support, network density and caregiving burden or strain in ethnic minority families.

4. Implications

- * More precise data bases would enable us to assess frequency, type, and the impact of late life dementias and related disorders among the ethnic minority elderly.
- * Initial implications that lower income equals

lower access to resources and additional stress for family caregivers of the demented ethnic minority elderly.

* Ethnic minority elderly are one of the fastest growing segments in the older population which would seem to indicate that this group because of a lifetime of poorer health, fragmented health care, absence of good diagnosis, and lower income levels are likely to require more varied and increased services.

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CAREGIVERS OF PATIENTS WITH DEMENTIA

FINAL REPORT

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INTRODUCTION

III

INTRODUCTION

This study of caregivers of patients with Alzheimer's Disease or another dementing illness is based on a mail survey carried out between November 26, 1986 and January 28, 1986. This section of the report presents the study purpose, study scope and method and a description of the sample obtained.

Study Purpose

The purpose of this study, conducted for the Office of Technology Assessment (OTA) of the United States Congress, is to query family members (or other caregivers) of patients with Alzheimer's disease or another dementing illness in order to:

... Collect information about the attitudes of caregivers, their experiences, the need for and availability of services, equity of access to services, costs of care, and special problems, and

... Provide information to assist in the planning and providing of services for patients with Alzheimer's disease.

In reaching these objectives, the role of Yankelovich, Skelly and White/Clancy, Shulman, Inc. was to work with Ms. Nancy Mace, an OTA consultant, in the development and revision of the questionnaire and interpretation of the results. YSW/CS was responsible for the administration of the questionnaire and tabulation of the results.

Methodology

This study is based on a national survey of caregivers, using as a sample names and addresses provided by the Alzheimer's Disease and Related Disorders Association. The principal methodological steps involved in carrying out this research are described below.

1. Questionnaire Revision and Development

The first research step was to revise the questionnaire that had been drafted by Ms. Nancy Mace, an expert on Alzheimer's disease and an OTA consultant on the project. These revisions included rewriting questions, dropping some and adding others, developing a logical sequence of inquiry and developing skip patterns for questions which should or should not be answered by certain respondents.

In addition, two sets of attitudinal questions were added--based on YSW/CS's experience in carrying out such research--in order to provide a context for analyzing the more specific survey items.

This revised questionnaire was approved by Ms. Mace and OTA staff members.

2. The Sampling

The sample for this study is a systematic sample (i.e., the selection of every nth name) from a mailing list provided by the Alzheimer's Disease and Related Disorders Association. Individuals were on this list because they had written to the Association to give a donation or to ask for information. This list was provided by the Office of Technology Assessment to YSW/CS and used for the study because it was the only existing nationwide list of potential caregivers of dementia patients.

3. Pre-Testing the Questionnaire

To pre-test the survey instrument, the questionnaire was sent to 40 individuals on the ADRDA mailing list on October 5, 1985. A total of six completed questionnaires was received. From these, it was concluded that only a few minor adjustments were needed in the survey instrument.

More importantly however, the pre-test indicated that a substantial number of persons on the ADRDA mailing list were not (or had not been) caregivers of patients with dementia. More specifically:

... Many of the individuals on the mailing list had moved and left no forwarding address;

... Some individuals reported that they had merely written to the Association for information;

... Some individuals reported that they had written, thinking they had a relative or friend with Alzheimer's disease, but subsequently found this not to be the case; and

... Some individuals were health professionals involved in the care of dementia patients.

Some of these problems had been expected, but it was apparent that the proportion of qualified respondents--actual caregivers--drawn from the ADRDA mailing list would be lower than had been anticipated. For this reason, the sample size was increased from the previously planned 1,900 to 2,400.

4. The Screener

In addition, a one-page screener was written to be included in the final mailing of the questionnaire. The purpose of the screener was to provide further instructions on who should fill out the questionnaire and to collect information about individuals who were not caregivers and thus should not answer the survey instrument. The screener told respondents the questionnaire was being sent to people who have expressed an interest in knowing more about Alzheimer's disease or another dementing illness. It asked respondents to indicate the source of their interest by checking one of the following boxes (the category which was most appropriate to them):

A. I am a doctor, nurse, medical facility operator or other paid professional working in the field.

B. I thought that someone I knew had Alzheimer's disease but this turned out not to be the case.

C. Someone I know has/had Alzheimer's disease or another dementing illness

D. Other (please specify.________________________)

Respondents who checked C were asked to fill out the questionnaire and return it to YSW/CS in an enclosed envelope. Those who checked A, B or D were asked to return the screener to YSW/CS. The purpose of the latter was to obtain an indication of how many individuals in the sample did not qualify for one of these reasons.

5. The Questionnaire

The final questionnaire consisted of a cover letter, instructions, 24 pages of questions and a back page for respondents to write in comments. (The questionnaire is reproduced in Appendix A.)

The cover letter was on Yankelovich, Skelly and White stationery. It informed respondents of the purpose of the survey, its sponsors and sought to obtain their cooperation in filling out the questionnaire. It read as follows:

> Dear Participant:
>
> As you know, caring for a person with Alzheimer's disease or another dementing illness can involve a major personal sacrifice--a commitment of time, energy, and financial resources.
>
> Congress has asked the Office of Technology Assessment to collect information about what it is like to care for someone who has a dementing illness--in order to determine what can or should be done to help such persons. We have been asked by the Office of Technology Assessment to carry out such an investigation.
>
> Yankelovich, Skelly and White is proud to be conducting a study of such importance. We are also fortunate to be working with one of the foremost experts in the care of patients with dementia--Nancy Mace, the co-author of The 36 Hour Day.

> By filling out this questionnaire, you will be contributing to the success of this effort. I thank you ahead of time for doing so.
>
> Sincerely,
>
> Arthur H. White
> Vice Chairman
> Yankelovich, Skelly and White, Inc.

The instructions asked respondents to answer all questions on both sides of the page by placing an "X" in the appropriate box. It also told respondents to follow the arrows and other instructions to determine which specific questions should be answered and when they should go to the next question or page.

If the patient was deceased, respondents were instructed to indicate so in the appropriate question and to answer the questions as the situation existed just prior to the patient's passing away.

Respondents were also assured of anonymity.

The questionnaire itself was divided into sections as follows:

General Questions

Questions About the Patient

Questions About the Patient's Care

Questions About Getting Help to Care for the Patient

Questions About the Availability of
Services to Help the Patient

Questions about Paying for the
Patient's Care.

On the last page of the questionnaire, respondents were thanked for their time and attention and invited to write in any comments they may have on the issues explored in the questionnaire.

6. Survey Response

The questionnaires were mailed out on November 26. A follow-up postcard was sent two weeks later, asking respondents to return the questionnaire if they had not already done so. The cut-off date to process the questionnaires for data analysis was January 28.

In total 569 individuals completed and returned usable questionnaires. This satisfied the goal of obtaining at least 500 responses--which was seen as necessary to carry out the statistical breakdowns involved in the analysis.

In addition, 101 questionnaires were returned by the postal service as being non-deliverable, and 156 screeners were sent back without completed questionnaires. The screeners were distributed as follows:

A. Health professionals (21).

B. Thought someone had Alzheimer's disease but it turned out not to be the case (41).

C. Knew someone who had Alzheimer's disease--but (written in) did not feel they were knowledgeable enough to answer the questionnaire (35).

D. Other (59).

These 257 respondents can be subtracted from the 2,400 mailed out, bringing the adjusted sample size to 2,143. Based upon this sample figure, the return rate for the study is 27% (569 divided by 2,143).

Many comments were written in on the screeners--especially among those checking C and D--indicating why the questionnaire was not filled out. A common reason among those selecting C was that the respondent did not know enough to answer many of the questions. In addition, respondents indicated that they were writing for information because they thought they might have Alzheimer's disease themselves, were collecting information for a term paper, had made a donation, etc.

Some respondents apologized for not being able to answer the questionnaire, giving such reasons as the following:

> Dear Sir:
>
> In regard to your questionnaire, which I am returning unanswered, please be advised I am unable to relate the painful experience of seeing my husband die a little each day. It is now three years since he was released from this demoralizing disease--for which I am grateful.
>
> I started to check some of the questions but could go no further. I hope other victims' families are better able to help in your research.

7. Check-In and Editing

Included with the questionnaire was a pre-addressed, pre-paid envelope in which to mail the completed form to Yankelovich, Skelly and White headquarters in New York. Staff members checked in and edited all questionnaires and screeners--including coding the state of residency of the patient (Question 30). The questions themselves were pre-coded, so that responses could be directly keypunched from the questionnaire.

More than 200 respondents wrote in comments on the last page of the questionnaire. These were xeroxed and read for insights.

8. Statistical Analysis

Completed questionnaires were entered onto computer tape and tables of cross tabulations were produced. Key analytical categories included in these tables are the respondents' role as caregiver, where the patient lives, the length of the patients' illness, the severity of the patients' illness, attitudes toward health care assistance and nursing homes, and whether the spouse is the primary caregiver. Analysis for this report was conducted by the YSW/CS study team.

Key Sample Characteristics

The key characteristics of the survey sample are that it is national in scope, composed for the most part of relatives of patients, includes respondents who are both primary and secondary caregivers and focuses upon patients who in all but a few cases have Alzheimer's disease.

Scope of Sample

The sample is national in scope. It includes respondents living in 49 states and the District of Columbia. The largest proportions of respondents are from:

	%
Florida	10
California	8
New York	8
Illinois	7
Pennsylvania	7
Texas	5
Ohio	5
Massachusetts	5

Relation to Patient

Most of the respondents are family members or relatives of the patient with dementia. The majority is either the daughter or spouse of the patient.

... Twenty-nine percent report being daughters of the patient with dementia, while 4% are daughters-in-law of the patient. Nine percent are sons or sons-in-law of the patient.

... Twenty-four percent are spouses of the patient.

... Sixteen percent report being relatives other than children or spouses.

(See Table I-1)

Role as Caregiver

Respondents report playing three main caregiving roles in relation to the patient with dementia.

... Thirty-seven percent report being the primary caregiver--the person who most directly or most frequently cares for the patient with dementia.

... Twenty-five percent are involved in the care of a dementia patient but in a secondary or minor role (14% report caring for a patient but not being the primary caregiver; 11% report helping care for the patient but in a minor way).

... Twenty-one percent have primary responsibility for decision-making about the affairs of a patient living in a nursing or boarding home.

(See Table I-2)

Illness of the Patient

Individuals answering this questionnaire were almost all involved in caring for a patient with Alzheimer's disease.

... Eighty-three percent report the patient's diagnosis to be Alzheimer's disease; 9% multi-infarct dementia; 3% another dementia illness.

... Five percent did not know what the diagnosis was.

(See Table I-3)

Where the Patient Lives

Another important sample characteristic involves where the patient lives--whether with the primary caregiver/respondent, with someone else, in a nursing home, etc.

... The largest proportion--40%--lives with a primary caregiver. Eighteen percent of the patients reportedly live with the respondent as the primary caregiver. Twenty-two percent reportedly live with someone else who is the primary caregiver.

... Thirty-four percent of the patients are in a nursing home. Another 3% are in a foster, personal care, or boarding home and another 1% in a Veterans Administration home or hospital.

... Seventeen percent of the patients are deceased.

(See Table I-4)

TABLE I-1

RELATION OF RESPONDENT TO INDIVIDUAL WITH ALZHEIMER'S DISEASE

Respondent Is:	Total %	
Spouse	24	
Daughter	29	>33%
Daughter-in-law	4	
Son	9	>9%
Son-in-law	*	
Other relative	16	
Friend	7	
Other	11	

* Less than .5%.

Question: What is your relationship to the individual who has Alzheimer's disease or another dementing illness?

TABLE I-2

RESPONDENTS' ROLE AS CAREGIVER OF DEMENTIA PATIENT

	Total
	%
I am the primary caregiver--the person (other than a doctor or paid professional) who most directly or most frequently cares for the patient with dementia (or have done so in the past if the person is deceased or in a nursing home)	37
I am involved in caring for the patient with dementia but am not the primary caregiver	14
I help care for the patient with dementia but in a minor way	11
The patient lives in a nursing or boarding home, but I have primary responsibility for decision-making about the patient's affairs	21
Other	18

Question: What is your role in helping care for this individual?

TABLE I-3

DIAGNOSIS OF PATIENT

	Total
	%
Alzheimer's disease (also called SDAT or DAT), senility, organic brain syndrome	83
Multi-infarct dementia, stroke, cerebral arteriosclerosis, hardening of the arteries	9
Other (a dementia illness)	3
Other (the patient does not have a dementia illness)	1
Don't know	5

Question: What is the patient's diagnosis?

TABLE I-4

WHERE THE PATIENT WITH DEMENTIA LIVED/LIVES

	Total Respondents
	%
In a nursing home	34
With the primary caregiver (if other than you)	22
With you	18
Alone	4
In a foster, personal care, or boarding home	3
In a Veterans Administration home or hospital	1
With someone else	1
Patient is deceased	17

Question: "Where does the patient live?"

DETAILED STUDY FINDINGS

1. Caregivers' Attitudes Toward Getting Help in Caring for Alzheimer's Patients

I

Chapter 1

Caregivers' Attitudes Toward Getting Help in Caring for Alzheimer's Patients

An overview of these caregivers' attitudes toward caring for patients with dementia is provided by their answers to two batteries of agree/disagree questions included in the survey. The results show--in unmistakedly clearcut fashion--the extent to which individuals caring for Alzheimer patients feel they need help but are not receiving it.

Caregivers feel they need help from government but are not receiving nearly enough. They believe they should rely on the guidance of health care professionals but have mixed views about the quality of assistance being provided. They think that patients with severe cases of Alzheimer's should live in a nursing home, but doubt that existing nursing homes provide adequate care. They report that it is difficult to get satisfactory professional assistance in caring for an Alzheimer's patient at home and admit that they don't really know where to go to get such help.

The Need for Government Help

Caregivers reject the view that health care is something that people ought to take care of themselves. At the same time, however, most feel that government agencies are not providing sufficient financial support for patients with Alzheimer's disease.

... Seventy-two percent disagree with the view that "health care people ought to take care of themselves and not rely on government to provide for them."

... Eighty-seven percent, at the same time, agree that "government agencies do not provide the financial support they should be providing in the care of patients with Alzheimer's."

(See Table 1-1)

The Need to Rely on Health Care Professionals

Caregivers overwhelmingly feel they should rely on health care professionals in dealing with an illness such as Alzheimer's.

... Ninety-one percent agree "in the case of an illness such as Alzheimer's, it is best for people to rely on the advice and assistance of health care professionals."

However, their experience in relying on health care professionals has been mixed, especially with regard to managing patients with Alzheimer's disease.

... Forty-one percent agree with the statement, "The assistance I've received from health care professionals--in caring for an individual with Alzheimer's disease--has been excellent." Thirty-eight percent disagree.

... Sixty-one percent agree, "In my experience, most health care professionals know little about managing patients who have Alzheimer's disease." Twenty-three percent disagree.

... Forty-two percent agree, "From what I have seen, a patient who is ill with dementia receives worse care from health professionals than patients who are ill with something else." Thirty-seven percent disagree.

(See Tables 1-1 and 1-2)

The Use of Nursing Homes for Alzheimer's Patients

Caregivers have mixed feelings regarding nursing home care. On the one hand, caregivers believe it is best for Alzheimer's patients to live at home with friends and relatives; on the other hand, they believe that a patient with a severe case of Alzheimer's should live in a nursing home. Their belief that it is best for patients to live at home is buttressed by their assessments of nursing homes--which they more often see as providing inadequate than adequate care.

... Sixty-three percent believe "The best place for an individual with Alzheimer's disease is to live at home with friends and relatives," and 71% agree that "Ways should be found for an individual with Alzheimer's disease to live at home with friends and relatives."

... While living at home is preferred, 80% agree with the statement, "When all is said and done, a patient with a severe case of Alzheimer's disease should be living in a nursing home."

... Caregivers more often give nursing homes negative rather than positive ratings both in providing care generally and in caring for Alzheimer's patients specifically.

- Forty-eight percent agree and 52% disagree that "nursing homes provide high quality care for individuals who live in them."
- Fifty-three percent agree and 26% disagree with the statement, "In my view, the existing nursing homes where Alzheimer's patients might live are inadequate in the care they provide."

(See Tables 1-1 and 1-2)

Getting Help for Home Care

Most caregivers, finally, report having difficulty finding professional help in caring for Alzheimer's patients at home; a majority admit they don't really know where to go for help.

... Fifty-seven percent agree, "I have found it difficult to find satisfactory paid professionals to assist in caring for an Alzheimer's patient at home." Only 10% disagree.

... Fifty-five percent agree, "I really don't know where to go to get help in caring for an Alzheimer's patient at home." Twenty-six percent disagree."

(See Table 1-2)

TABLE 1-1

REACTION TO STATEMENTS ABOUT HEALTH CARE AND CARING OF INDIVIDUALS WITH ALZHEIMER'S DISEASE

	Strongly Agree	Agree	Disagree	Strongly Disagree
100%→	%	%	%	%
What Is Your Reaction to These Statements?				
Government agencies do not provide the financial support they should be providing on the care of patients with Alzheimer's	54	33	11	2
When all is said and done, a patient with a severe case of Alzheimer's disease should be living in a nursing home	42	38	16	4
In the case of an illness such as Alzheimer's, it is best for people to rely on the advice and assistance of health care professionals	40	51	8	1
Ways should be found for an individual with Alzheimer's disease to live at home with friends and relatives	26	45	21	8
The best place for an individual with Alzheimer's disease is to live at home with friends and relatives	21	42	27	10
Nursing homes provide high quality care for individuals who live in them	7	41	38	14
Health care is something people ought to take care of themselves and not rely on government to provide for them	6	22	43	29

Note: This table is percentaged horizontally.

Question: "To begin with, here are some statements about health care and about caring for an individual with Alzheimer's disease or another dementing illness. Please tell us whether you strongly agree, agree, disagree, or strongly disagree with each."

TABLE 1-2

ASSESSMENT OF HEALTH CARE PROFESSIONAL'S ROLE IN CARING FOR PATIENTS WITH ALZHEIMER'S OR ANOTHER DEMENTING ILLNESS

What Is Your Reaction to These Statements?	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Sure/ Not Applicable
100%→	%	%	%	%	%
The assistance I've received from health care professionals--in caring for an individual with Alzheimer's disease--has been excellent	9	32	25	13	21
In my experience, most health care professionals know little about managing patients who have Alzheimer's disease	22	39	22	2	15
From what I have seen, a patient who is ill with dementia receives worse care from health professionals than patients who are ill with something else	16	26	33	4	21
I have found it difficult to find satisfactory paid professionals to assist in caring for an Alzheimer's patient at home	28	29	9	1	33
I really don't know where to go to get help in caring for an Alzheimer's patient at home	23	32	23	3	19
In my view, the existing nursing homes where Alzheimer's patients might live are inadequate in the care they provide	21	32	22	4	21

Note: This table is percentaged horizontally.

Question: "Here are some statements about the care of patients with Alzheimer's disease or another dementing illness. Please indicate whether you strongly agree, agree, disagree, or strongly disagree with each."

2. Illnesses and Inabilities Associated With Alzheimer's Disease

Chapter 2

Illnesses and Inabilities Associated With Alzheimer's Disease

The extreme problems associated with caring for a patient with Alzheimer's disease are well illustrated in this survey. The victims of Alzheimer's usually suffer a continuing decline in their mental and physical facilities. It is this decline--and its extreme mainfestations--which makes caring for Alzheimer's patients such an anguishing and agonizing experience, requiring outside assistance and (oftentimes) nursing home care.

This chapter profiles and summarizes the illnesses and inabilities of the patients focused upon this study. It examines the length of these patients' illness and the disabilities associated with it. It shows how these disabilities are cumulative and how they become more severe over time.

Length of Illness

The victims of Alzheimer's disease often possess the illness for a number of years, requiring extended care. Further, several years often pass before the disease is first diagnosed.

Both of these tendencies are indicated in the data.

... A majority of patients are reported to have been diagnosed as having a dementia illness for four years or more. For 1 in 4, the diagnosis was made six or more years ago.

... A majority of patients are reported to have had a dementia or memory disorder at least three years _prior_ to being diagnosed for it. One in five are reported to have had the problem for six years or more prior to diagnosis.

Combining these two figures, more than 3 in 4 patients in this study reportedly have had a dementing illness for more than five years. Approximately 1 in 3 have had the illness for ten years or more.

(See Tables 2-1 and 2-3)

Ability to Do Basic Tasks

The patients being cared for by study respondents are reported to possess a wide array of physical and psychological disabilities associated with their illness. A large majority, first of all, cannot cope with small sums of money or perform simple household tasks, such as setting the table or simple home repairs. A majority (55%) cannot dress without assistance. More than 1 in 3 cannot eat without assistance or walk without assistance.

(See Table 2-3)

Toilet Skills

Only 24% of the dementia patients are reported to have independent/fully functional toilet skills. Twenty-seven percent have occasional accidents and 12% frequent accidents. Thirty-seven percent are doubly incontinent.

(See Table 2-4)

Eating Skills

Only a minority of these patients--37%--is reported to eat cleanly with the proper utensils. Twenty-nine percent have to be fed by others; 4% are tube fed.

(See Table 2-5)

Sleep Habits

Thirty percent of the dementia victims cannot get out of bed without assistance. Eighteen percent are reportedly out of bed most nights; 23% occasionally. Only 29% are reported to remain in bed most nights.

(See Table 2-6)

Weight Loss/Gain

Forty-eight percent of the patients are reported to have lost 10 pounds or more in the past year, while 12% reportedly gained 10 pounds or more.

(See Table 2-7)

Other Behaviors

These patients also frequently have periods of restlessness and agitation, listlessness and apathy, depression, etc. From the reports of these caregivers:

... Forty-four percent very frequently have periods of restlessness and agitation.

... Thirty-seven percent very frequently become listless and apathetic.

... Thirty percent very frequently wander away from home unless watched.

... Twenty-one percent very frequently have inappropriate angry outbursts.

... Fifteen percent very frequently engage in crying episodes.

... Ten percent very frequently engage in actions (hit, pinch, throw things) that physically hurt people.

(See Table 2-8)

An Index of Degree of Illness

Patients who have one of these disabilities, as would be expected, often have others as well. Patients who have poor eating skills, for example, usually have poor toilet skills as well. Furthermore, there tends to be a sequence of disabilities: Patients often first have difficulty performing simple household tasks, then cannot dress without assistance, and finally cannot eat or walk without assistance.

For these reasons, it is possible to combine several of these disabilities into a single index. This has been done with the five items involving basic tasks. The result is a four-point index of degree of illness, with patients distributed as follows:

		%
1	(Most ill)	28
2		29
3		25
4	(Least ill)	17

The validity of this index--and the cumulative nature of these disabilities--is indicated by showing the relation between patients' positions on this index with other disabilities not a part of the index. The relationship is strong. For example:

... Among the most ill group, 85% are reportedly doubly incontinent; only 1% have independent/fully functional toilet skills. Among the least ill group, in contrast, only 3% are doubly incontinent while 78% have independent/fully functional toilet skills.

... Among the most ill group, 83% have to be fed; only 1% eat cleanly. Among the least ill group, 90% eat cleanly and 2% have to be fed.

(See Tables 2-9 to 2-11)

Other inter-relationships are likewise strong. The point is that very ill patients usually have a large number of severe disabilities. As would be expected, furthermore, these tend to occur cumulatively over the length of the dementia illness.

... Among patients who have been diagnosed as having Alzheimer's for one year or less, only 11% have inabilities which place them in the most ill group.

... This figure increases to 21% (2-3 years after diagnosis), to 33% (4-5 years), to 45% (6-9 years), to 51% (10 years or more).

(See Table 2-12)

TABLE 2-1

NUMBER OF YEARS SINCE DIAGNOSIS

Number of Years Since Diagnosis Was Made	Total %
Less than one	6
One	8
Two or three	34
Four or five	26
Six or seven	14
Eight or nine	5
Ten to fourteen	5
Fifteen or more	3

Question: How many years ago was this diagnosis made?

TABLE 2-2

NUMBER OF YEARS PATIENT THOUGHT TO BE ILL PRIOR TO DIAGNOSIS

	Total
Number of Years Prior to Diagnosis	%
None	7
Less than one	7
One	14
Two	19
Three	15
Four	10
Five	9
Six	4
Seven or more	16

TABLE 2-3

ABILITY OF PATIENT WITH DEMENTIA TO DO BASIC TASKS

100% →	Very Well	Somewhat	Not At All
	%	%	%
How Well Is Patient Able to Do These Tasks?			
Walk without assistance	36	27	37
Eat without assistance	32	33	35
Dress without assistance	15	30	55
Perform simple household tasks, such as setting the table or simple home repairs	7	20	73
Cope with small sums of money	6	16	78

Note: This table is percentaged horizontally.

Question: "How well is the patient able to do each of the following?"

TABLE 2-4

ASSESSMENT OF PATIENT'S TOILET SKILLS

What Are Patient's Toilet Skills Like?	Total Respondents %
Independent/fully functional	24
Has occasional accidents/needs some help or reminder	27
Has frequent wet beds or accidents	12
Is doubly incontinent (has bowel and urine accidents)	37

Question: "What are the patient's toilet skills like?"

TABLE 2-5

ASSESSMENT OF PATIENT'S EATING SKILLS

	Total Respondents
	%
What Are Patient's Eating Skills Like?	
Eats cleanly, with proper utensils	37
Eats messily	24
Only eats simple solids, like crackers by self	6
Has to be fed by others	29
Is tube fed	4

Question: "What are the patient's eating skills like?"

TABLE 2-6

ASSESSMENT OF PATIENT'S SLEEP HABITS

	Total Respondents
	%
What Are Patient's Sleep Habits Like?	
Remains in bed most nights	29
Is out of bed occasionally	23
Is out of bed most nights	18
Cannot get out of bed without assistance	30

Question: "What are the patient's sleep habits like?"

TABLE 2-7

PATIENT'S GAIN/LOSS OF WEIGHT

Has Patient Gained or Lost 10 Pounds in Past Year?	Total Respondents %
Yes, gained 10 pounds or more	12
Yes, lost 10 pounds or more	48
No, no change in weight	30
Don't know	10

Question: "Has the patient gained or lost 10 pounds or more in the past year?"

TABLE 2-8

FREQUENCY OF PATIENT'S ENGAGEMENT IN CERTAIN BEHAVIORS

	Very Frequently	Occasionally	Rarely/ Never	Don't Know
100% ⟶	%	%	%	%
How Frequently Does Patient:				
Have periods of restlessness and agitation	44	38	11	7
Become listless and apathetic	37	34	15	14
Get in a depressed mood	30	36	14	20
Wander away from home unless watched	29	24	36	11
Have inappropriate angry outbursts	21	37	34	8
Engage in crying episodes	15	30	43	12
Engage in actions (hit, pinch, throw things) that physically hurt people	10	19	61	10

Note: This table is percentaged horizontally.

Question: "How frequently does the patient:"

TABLE 2-9

RELATION BETWEEN DEGREE OF ILLNESS INDEX AND PATIENTS' TOILET SKILLS, EATING SKILLS AND SLEEP HABITS

	Degree of Illness*			
	Most 1	2	3	Least 4
	%	%	%	%
Total	28	29	25	17
Toilet Skills				
Independent/fully functional	1	5	35	78
Doubly incontinent	85	31	11	3
Eating Skills				
Eats cleanly, with proper untensils	1	21	62	90
Has to be fed by others/ is tube fed	83	23	5	2
Sleep Habits				
Remains in bed most nights	12	26	41	48
Cannot get out of bed without assistance	77	22	2	2

* Summated index comprised of patients' ability/inability to engage in basic tasks listed in Table 2-3.

TABLE 2-10

RELATION BETWEEN DEGREE OF ILLNESS INDEX
AND PATIENTS' WEIGHT LOSS/GAIN

	Degree of Illness			
	Most 1	2	3	Least 4
	%	%	%	%
Weight Change in Past Year				
Gained 10 pounds or more	7	13	14	16
Lost 10 pounds or more	67	46	35	37
No change in weight	16	31	44	32
Don't know	10	9	7	15

TABLE 2-11

RELATION BETWEEN DEGREE OF ILLNESS INDEX AND OTHER BEHAVIORS

	Degree of Illness			
	Most 1	2	3	Least 4
	%	%	%	%
Proportion Who Very Frequently*:				
Have periods of restlessness and agitation	49	54	43	38
Become listless and apathetic	67	42	30	25
Get in a depressed mood	52	41	26	38
Wander away from home unless watched	38	40	25	20
Have inappropriate angry outbursts	33	24	17	16
Engage in crying episodes	25	20	8	13
Engage in actions (hit, pinch, throw things) that physically hurt people	16	15	6	4

* Calculated without don't knows.

TABLE 2-12

RELATION BETWEEN DEGREE OF ILLNESS AND LENGTH OF ILLNESS

	Degree of Illness			
	Most 1	2	3	Least 4
100%⟶	%	%	%	%
Length of Illness*				
One year or less	11	28	25	36
Two to three years	21	26	35	18
Four to five years	33	35	22	10
Six to nine years	45	28	18	8
Ten years or more	51	26	8	15

* After diagnosis.

Note: This table is percentaged horizontally.

3. Experience With Health Care Professionals and Services

I

Chapter 3

Experience With Health Care Professionals and Services

Examined in this chapter are these caregivers' reported experiences with health care professionals and services--with doctors, hospitals, nursing homes and Veterans hospitals. The main focus is upon the extent to which such professional services are used and the quality of care they provide.

Consistent with the findings in Chapter 1, caregivers give mixed evaluations of their experiences. Some feel patients have received excellent care, others are more disenchanted. In general, caregivers give the highest ratings to doctors caring for the patient; they are more critical of the care provided by hospitals and nursing homes. Their experience with Veterans hospitals is more limited.

As will be seen, these caregivers are more satisfied with the services they receive from their specific doctor or nursing home than from health care professionals generally and or from nursing homes in general, as reported upon in Chapter 1.

Experience With Doctors

Caregivers were asked to report several kinds of information about their experiences with doctors:

... How much difficulty they had in finding a doctor to adequately care for the patient.

... How satisfied they were with the care they received from the doctor currently playing this role.

... How frequently they see a family doctor, how knowledgeable this doctor is about dementia and whether he/she had inquired about the health of the primary caregiver.

While caregivers often had trouble finding a doctor--and most patients saw two or more doctors--2 in 3 of these respondents report being satisfied with the care the patient received.

Finding a Doctor

Caregivers report having varying experiences in finding a doctor who could adequately care for the patient. Half report having a great deal or moderate amount of trouble finding a doctor; half report having only a little trouble or none at all.

(See Table 3-1)

Satisfaction With Doctor

Most caregivers report being satisfied with the care the patient currently receives from a doctor.

... Twenty-eight percent are very satisfied, while 38% are moderately satisfied. One in three caregivers, however, is only somewhat satisfied (24%) or not satisfied at all (10%).

(See Table 3-2)

Number of Doctors Seen

Most patients, according to these reports, have seen two or more doctors in having their illness diagnosed or treated. In total, 30% of the caregivers report the patient has gone to two doctors, 19% to three and 21% to four or more. Only 19% have gone to only one doctor.

(See Table 3-3)

Frequency of Seeing a Doctor for Dementia Treatment

Patients vary in the frequency with which they see a doctor treating them for dementia--some see a doctor on a fairly regular basis, others infrequently or never at all.

... Twenty-eight percent see a doctor at least once a month.

... Twenty-three percent see a doctor several times a year.

... Thirty-one percent see a doctor only occasionaly, while 18% reportedly never see a doctor at all.

(See Table 3-4)

Patients in nursing homes see a doctor more regularly, with 49% doing so at least once a month. In contrast, 13% of patients living with a primary caregiver see a doctor at least once a month.

Frequency of Seeing a Family Doctor

Patients reportedly see a family doctor at about the same frequency as a doctor treating them for dementia. In total, 27% reportedly see a family doctor at least once a month, 31% several times a year, 30% only occasionally and 12% never at all.

... Forty-six percent of patients living in nursing homes reportedly see a family doctor at least once a month, as compared with 16% living with a primary caregiver.

(See Table 3-5)

Knowledgeability of Family Doctor

The caregivers were asked how knowledgeable the family doctor is about the care and management of patients with dementia. Most caregivers--54%--report the family doctor is somewhat knowledgeable. Seventeen percent feel th family doctor is very knowledgeable, while 16% believe the doctor is not knowledgeable at all.

(See Table 3-6)

Inquiring About the Health of the Primary Caregiver

Caregivers, finally, were asked whether the family doctor had asked about the health of the person who provides the most care to the patient with dementia. One in two indicates that the family doctor had done so. Twenty-three percent report that the family doctor had often inquired about the primary caregiver's health, 27% indicate that the family doctor had done so on occasion.

(See Table 3-7)

Experience With Hospitals

Caregivers' experiences with hospitals have been somewhat more negative. Seven in ten caregivers report that the patient had been hospitalized--at least overnight--since becoming ill with dementia. They give mixed reports about how the hospital personnel handled the patient's dementia problems:

... Fourteeen percent describe the patient's handling as being excellent, 28% as good.

... Twenty-seven percent say it was fair.

... Fifteen percent indicate the hospital's handling of the patient was poor and 7% report it to be very poor.

(See Tables 3-8 and 3-9)

While caregivers are often dissatisfied with the patient's handling in the hospital, in only a few instances--8% of the total--were patients moved from one hospital to another because of poor handling of the patient's dementia problems. Twenty percent of the caregivers, however, feel the patient had been discharged from the hospital when he/she should have remained there longer for treatment.

(See Tables 3-10 and 3-11)

Experience With Nursing Homes

As shown in Chapter 1, caregivers have mixed feelings about nursing homes. On the one hand, they believe it would be better for the patient to live at home with friends and relatives--and often have doubts about the quality of care provided by nursing homes. On the other hand, these caregivers also believe than an individual with a severe case of Alzheimer's should live in a nursing home.

In fact, a majority of these caregivers--58%--report that they or someone else had applied to have the patient admitted to a nursing home. This was most often done, as would be expected, for patients who were most ill.

... Among the most ill group of patients, 76% of caregivers applied to have the patient admitted to a nursing home.

... In contrast, 25% from among the least ill group have applied to be admitted to a nursing home.

(See Tables 3-12 and 3-13)

Nursing homes often try to get caregivers to agree to pay for the patient's stay in a nursing home, since private payment is usually higher than Medicaid. Accordingly, respondents were asked whether they were told about nursing home payment when they applied for admissions. The results were as follows:

... Fifty-one percent report being told the patient's spouse would have to pay for the patient's support.

... Thirty-seven percent were told they would have to sign an agreement requiring the family to pay for the patient for a specified length of time.

... Fourteen percent were told they must make a donation to the nursing home for the patient to stay there.

(See Table 3-14)

In most instances (88%), the patient was reportedly admitted to the nursing home. In total, 62% of applicants are currently living in a nursing home, while 26% had lived in a nursing home in the past. Among this group:

... Seventy percent had lived in only one nursing home, 22% in two homes and 8% in three or more.

... Eleven percent live (or had lived) in a special unit only for persons with dementia, 79% in a mixed unit and 6% in both kinds of units.

... Ten percent had been asked to leave a nursing home--mostly (in 76% of cases) because the patient's behavior made him/her difficult to manage. (See Tables 3-15 to 3-19)

An important finding pertains to the quality of care reportedly received. Caregivers give the nursing homes mixed marks, but on balance they were more positive than negative.

... Eighteen percent say the care the patient received was excellent; 37% reported it to be good.

... Twenty-seven percent say the care was "average."

... Eleven percent report the care to be "poor" and 5% "very poor." (See Table 3-20)

These figures contrast with those reported upon in Chapter 1 in which 56% of respondents agree and 26% disagree with the statement, "In my view, the existing nursing homes where Alzheimer's patients might live are indequate in the care they provide." Caregivers evidently feel better about their specific situations regarding nursing homes than those they perceive to exist generally. Indeed, caregivers who have had experience with a patient living in a nursing home less often agree that nursing homes are inadequate in the care they provide. Dropping from the statistics those with no opinion or the non-applicables:

... Sixty-one percent of caregivers who have or had a patient living in a nursing home feel the care provided by nursing homes is inadequate.

... Seventy-nine percent who have had no direct experience with a patient in a nursing home feel nursing homes provide inadequate care.

Experience With Veterans Hospital

Caregivers were also asked about patients' experience with Veterans Hospital care. In total, 18% of the patients were reported to be veterans, and of this group 43% were said to have applied to a Veterans Hospital to receive extended care for their dementing illness. Forty-five percent of those who had applied for admission to extended care were not accepted.

... The main reason given for not being admitted (in 62% of cases) was that the veteran did not have a service-connected disability.

Fifty-five percent of the total--or twenty patients--were admitted to a Veterans Hospital. Caregivers of patients in Veterans Hospitals mostly report the care the patient received to be excellent (40%) or good (40%). Ten percent describe the care as being average and 10% as poor.

... One patient was taken out of a Veterans Hospital because of poor care.

(See Tables 3-21 to 3-26)

TABLE 3-1

AMOUNT OF TROUBLE HAD FINDING A DOCTOR TO ADEQUATELY CARE FOR PATIENT WITH DEMENTIA

	Total Respondents
	%
How Much Trouble Had	
A great deal of trouble	19
A moderate amount	28
Only a little	18
None at all	35

Question: "How much trouble have you had finding a doctor who could adequately care for the patient with dementia?"

TABLE 3-2

LEVEL OF SATISFACTION WITH CARE PATIENT CURRENTLY RECEIVES FROM DOCTOR(S)

	Total Respondents
	%
How Satisfied Are You?	
Very satisfied	28
Moderately satisfied	38
Only somewhat satisfied	24
Not satisfied at all	10

Question: "How satisfied are you with the care the patient currently receives from doctor(s)?"

TABLE 3-3

NUMBER OF DOCTORS SEEN

	Total
	%
Number Seen:	
One	19
Two	30
Three	19
Four or five	16
Six or more	5
Don't know	12

Question: In total, how many doctors has the patient seen to diagnose or treat his/her dementia problems? (DO NOT INCLUDE DOCTORS WHO MIGHT HAVE BEEN SEEN ONLY FOR RESEARCH PROJECTS.)

TABLE 3-4

FREQUENCY OF SEEING A DOCTOR FOR TREATMENT FOR DEMENTIA

Frequency of Seeing Doctor for Treatment	Total %
At least once a month	28
Several times a year	23
Only occasionally	31
Never	18

Question: How often does the patient see a doctor who regularly treats patients with dementia?

TABLE 3-5

FREQUENCY OF SEEING A FAMILY DOCTOR

Frequency of Seeing a Family Doctor	Total Respondents %
At least once a month	27
Several times a year	31
Only occasionally	30
Never	12

Question: How often does the patient see a family doctor for care?

TABLE 3-6

ASSESSMENT OF FAMILY DOCTOR'S KNOWLEDGE ABOUT DEMENTIA

(Among caregivers reporting that the patient sees a family doctor)[1]

	Total Respondents
	%
Family Doctor Is:	
Very knowledgeable	17
Somewhat knowledgeable	54
Not knowledgeable at all	16
Don't know	12

[1] Base = 88%.

Question: Overall, how would you rate this doctor's knowledge about how to manage or care for patients with dementia?

TABLE 3-7

WHETHER FAMILY DOCTOR ASKED ABOUT HEALTH OF PRIMARY CAREGIVER

(Among caregivers reporting that the patient sees a family doctor)[1/]

	Total Respondents
	%
Has Family Doctor Asked?	
Yes, often	23
Yes, on occasion	27
No	35
Don't know	15

[1/] Base = 88%.

Question: Has this doctor asked about the health of the person who provides the most care to the patient with dementia? (CHECK ONE)

TABLE 3-8

WHETHER PATIENT EVER BEEN HOSPITALIZED SINCE BECOMING ILL WITH DEMENTIA

	Total Respondents
	%
Patient Has Been Hospitalized	
Yes	70
No	30

Question: Has the patient ever been hospitalized--at least overnight--since becoming ill with dementia?

TABLE 3-9

ASSESSMENT OF HOSPITAL PERSONNEL HANDLING OF PATIENT'S DEMENTIA PROBLEMS

(Among caregivers reporting that
the patient has been hospitalized)[1]

	Total Respondents
	%
In General, Would You Describe the Handing	
Excellent	14
Good	28
Fair	27
Poor	15
Very poor	7
Don't know	9

[1] Base = 70%.

Question: How, in general, would you describe the way that hopspital personnel handled the patient's dementia problems?

TABLE 3-10

WHETHER PATIENT WITH DEMENTIA EVER CHANGED HOSPITAL DUE TO POOR HANDLING

(Among caregivers reporting that the patient has been hospitalized)[1]

	Total Respondents
	%
Patient Ever Moved?	
Yes, once	7
Yes, twice	1
Yes, three times or more	-
No	92

[1] Base = 70%.

Question: Was the patient ever moved from one hospital to another because of poor handling of his/her dementia problems?

TABLE 3-11

WHETHER PATIENT WITH DEMENTIA EVER DISCHARGED FROM HOSPITAL WHEN NEEDED TO REMAIN LONGER

(Among caregivers reporting that the patient has been hospitalized)[1]

	Total Respondents
	%
Patient Ever Discharged	
Yes	20
No	69
Don't know	11

[1] Base = 70%.

Question: In your view, was the patient ever discharged from the hospital when he/she should have remained there longer for treatment?

TABLE 3-12

EVER APPLIED TO HAVE PATIENT WITH DEMENTIA ADMITTED TO A NURSING HOME

	Total Respondents
	%
Have You Ever Applied?	
Yes	58
No	42

Question: Have you or anyone else ever applied to have the patient admitted to a nursing home?

TABLE 3-13

RELATION BETWEEN APPLYING TO A NURSING HOME AND DEGREE OF ILLNESS

	Degree of Illness			
	Most 1	2	3	Least 4
	%	%	%	%
Applied to nursing home	76	64	53	25
Did not apply to nursing home	24	36	47	75

TABLE 3-14

WHETHER TOLD OF SPECIFIC FINANCIAL PAYMENT WHEN APPLYING FOR ADMISSION TO A NURSING HOME

(Among caregivers who applied to have the patient admitted to a nursing home)[1/]

When Applying, Were You Told Any of the Following:	Yes	No	Don't Know
	%	%	%
That the patient's spouse would have to pay for the patient's support	51	39	10
That they would have to sign an agreement requiring the family to pay for the patient for a specified length of time	37	49	14
That they must make a donation to the nursing home for the patient to stay there	14	73	13

1/ Base = 58%.

Question: When you applied, were you or other members of the patient's family told any of the following?

TABLE 3-15

WAS THE PATIENT ADMITTED TO A NURSING HOME

(Among caregivers who applied to have the patient admitted to a nursing home)[1/]

	Total Respondents
	%
Was Patient, In Fact, Admitted?	
Yes--and is currently living in a nursing home	62
Yes--has lived in a nursing home in the past	26
Yes--but did not enter the nursing home	-
No	12

[1/] Base = 58%.

Question: Was the patient in fact admitted to a nursing home?

TABLE 3-16

NUMBER OF NURSING HOMES THE PATIENT HAS LIVED IN

(Among caregivers reporting patient is currently/has lived in a nursing home)1/

Number of Nursing Homes Patient Has Lived In	Total Respondents %
One	70
Two	22
Three or more	8

1/ Base = 51%.

Question: In how many nursing homes has the patient lived?

TABLE 3-17

WHETHER PATIENT LIVED/LIVES IN A SPECIAL UNIT FOR PERSONS WITH DEMENTIA OR A MIXED UNIT

(Among caregivers reporting patient is currently/has lived in a nursing home)[1]

	Total Respondents
	%
What Kind of Unit Patient Lived/Lives In?	
Special unit for demented persons	11
Mixed unit	79
Both	6
Don't know	4

[1] Base = 51%.

Question: Did or does the patient live in a special unit only for persons with dementia or a mixed unit with residents--not all of whom are demented--with various problems?

TABLE 3-18

WHETHER PATIENT EVER ASKED TO LEAVE A NURSING HOME

(Among caregivers reporting patient is currently/has lived in a nursing home)[1/]

Was Patient Ever Asked to Leave a Nursing Home?	Total Respondents %
Yes	10
No	90

1/ Base = 51%.

Question: Was the patient ever asked to leave a nursing home?

TABLE 3-19

REASON(S) GIVEN FOR PATIENT BEING TOLD TO LEAVE A NURSING HOME

(Among caregivers reporting patient
lived in a nursing home and
was told to leave)[1]

	Total Respondents
	%*
Reasons Given:	
The patient was hard to manage because of his/her behavior	76
The patient ran out of private funds and the nursing home would not keep the patient on Medicaid funds alone	8
Other reasons	24

Base = 5%.

* Percentages add to more than 100% due to multiple responses.

Question: What reason(s) were give for the patient being told to leave?

TABLE 3-20

ASSESSMENT OF CARE RECEIVED BY PATIENT IN NURSING HOME(S)

(Among caregivers reporting patient is currently/has lived in a nursing home)[1/]

Decription of Care Received	Total Respondents %
Excellent	18
Good	37
Average	27
Poor	11
Very poor	5
Don't know	2

[1/] Base = 51%.

Question: In general, how would you describe the care the patient received in the nursing home(s)?

TABLE 3-21

WHETHER PATIENT WITH ALZHEIMER'S DISEASE IS A VETERAN

	Total Respondents
	%
Is Patient a Veteran?	
Yes	18
No	82

Question: Is the individual with Alzheimer's disease a veteran?

TABLE 3-22

PATIENT EVER APPLIED TO A VETERANS HOSPITAL TO RECEIVE CARE

(Among caregivers reporting patient is a veteran)[1]

	Total Respondents
	%
Has Patient Ever Applied?	
Yes	43
No	57

[1] Base = 18%.

Question: Has the patient ever applied to a Veterans Hospital to receive extended care for his dementing illness?

TABLE 3-23

WHETHER PATIENT ACCEPTED TO A VETERANS HOSPITAL TO RECEIVE EXTENDED CARE

(Among caregivers reporting patient is a veteran and had applied to a Veterans Hospital)[1]

	Total Respondents
	%
Was Patient Accepted?	
Yes	55
No	45

[1] Base = 8%.

Question: Was the patient accepted for extended care?

TABLE 3-24

REASONS GIVEN FOR PATIENT NOT BEING ACCEPTED BY A VETERANS HOSPITAL

(Among caregivers reporting patient is
a veteran and was not accepted by
a Veterans Hospital)[1]

	Total Respondents
	%
Reasons for Not Being Accepted	
Patient did not have a service-connected disability	62
Patient was under 65 years of age	-
Other	38

[1] Base = 3%.

Question: What reasons were given for the patient not being accepted?

TABLE 3-25

ASSESSMENT OF CARE PATIENT RECEIVED IN THE VETERANS HOSPITAL

(Among caregivers reporting
patient is a veteran
and was accepted to
a Veterans Hospital)[1]

Decription of Care Received	Total Respondents %
Excellent	40
Good	40
Average	10
Poor	10

[1] Base = 5%.

Question: In general, how would you describe the care the patient received in the Veterans Hospital?

TABLE 3-26

PATIENT EVER TAKEN OUT OF A VETERANS HOSPITAL DUE TO POOR CARE

(Among caregivers reporting
patient is a veteran
and was accepted to
a Veterans Hospital)[1]

Was Patient Ever Taken Out?	Total Respondents
Yes	5
No	95

[1] Base = 5%.

Question: Was the patient ever taken out of a Veterans Hospital by you or someone else because of poor care?

4. The Need, Availability and Use of Support Services

Chapter 4

The Need, Availability and Use of Support Services

The main focus of this study is on the need, availability and use of support services in caring for patients with dementia. These issues are taken up in this chapter.

Consistent with previous findings, caregivers report having a great deal of need for support services. In many instances, however, they do not know whether the service is available. And even when a service is available, it is often not used. Reasons given for not using such services include patients entering a nursing home, the expense and a lack of need.

Perceived Need for Support Services

To measure caregivers' perceived needs for support services, they were asked:

> ... Regardless of cost and current availability, how important do you think it is that each of the services described below be made available in your area to help care for patients with dementia?

Caregivers were presented with a list of eleven kinds of support services. Anticipating that they would regard most of these services as being very important, respondents were asked to indicate whether each was "essential-very most important," "very important," "important," or "not so important."

True to expectations, these caregivers' main tendency is to name all of these services as being either very important or essential--very most important. Most often named as being essential--by 68% of caregivers--is having the services of a paid companion to come into the home for a few hours each week to give the caregiver a rest. In general, the services most often named as essential involve getting home care help and obtaining assistance in locating and securing outside help.

Caregivers most often name the following six services as being essential:

	%
A paid companion who can come to the home a few hours each week to give caregivers a rest	68
Assistance in locating people or organizations that provide care for the patient	56
Assistance in applying for Medicaid, OASDI, SSI, etc.	54
A paid companion who can come to the home and provide overnight care so caregivers can go away for one or more days	53
A home health aide--a person paid to provide personal care for a patient, such as bathing, dressing, or feeding in the home	51
Support groups comprised of others who are caring for patients with dementia	50

Other services are also frequently seen by these caregivers as being essential:

	%
Nursing home care--special nursing home programs only for patients with dementia	48
Respite care--temporary round-the-clock care in a nursing home or hospital to care for the patients while the caregiver is away or takes some rest	47
Adult day care--a group program which provides out-of-the-home activity and supervision during the day	41
A visiting nurse--a registered nurse paid to provide nursing care to the patient at home	41

Less frequently named as an essential need (by 25%) is domiciliary or boarding care.

(See Table 4-1)

Availability of Services

Caregivers were also asked about the availability of several of these services where they (or the primary caregiver) live. Only two of these services were thought to be available by more than half of these respondents:

... Fifty-five percent report that a visiting nurse was available where they or the primary caregiver lived.

... Fifty-two percent report that a paid companion or home health aide was available.

- Less than 1 in 4 caregivers thought that any of the other four services asked about were available.

A main tendency is not to know whether a service is available. A majority or plurality of caregivers did not know whether any of the other services asked about was available:

Domiciliary/boarding care	(55%)
Respite care	(51%)
Adult day care	(43%)
Nursing home care	(41%).

(See Table 4-2)

Use of Services

Caregivers who reported that a service was available were asked whether they had used that service. Most often used as a service--by 62% of the caregivers--was a paid companion/home health aide. Twenty-one percent report using the service at the time of the survey, while another 40% were not doing so at the time of the survey but had done so in the past. Other of these services were currently or had been used by between 32% and 47% of the caregivers.

Of those who reported knowing a service was available:

... Thirty-four percent were currently using and 13% had used nursing home care.

... Twenty-five percent were using and 9% had used domiciliary or boarding care.

... Fifteen percent were using and 31% had used a visiting nurse.

... Twelve percent were using and 20% had used adult day care.

When caregivers know a service is available, they often use it. A large part of using a service is having it available and knowing it is available.

(See Table 4-2)

When Services Are Not Used

Caregivers who knew a service was available--but had not used it--were asked why the service was not used. Nine reasons were listed, with respondents told they could check as many as apply.

Several reasons were commonly given for not using these services. Most often cited is that the patient entered a nursing home, the service was too expensive, the patient got worse or died, the service was not needed, the people available to provide the service were not sufficiently knowledgeable about dementia and the patient refused to accept the service. To illustrate, caregivers gave the following reasons for not using a paid companion or home health aide--the most essential of these services, according to their reports.

... The patient entered a nursing home (48%).

... The service is too expensive (33%).

... The patient got worse or died (22%).

... The people available to provide the service are not sufficiently knowledgeable about dementia (18%).

... The patient refused to accept the service (16%).

Roughly the same reasons were given--in the sample proportions--for not using others of these services. An exception to be noted: 27% of caregivers report not using adult day care because the patient refused to accept the service.

(See Table 4-3)

TABLE 4-1

ASSESSMENT OF IMPORTANCE OF CERTAIN SERVICES TO BE PROVIDED TO PATIENTS WITH DEMENTIA, REGARDLESS OF COST/CURRENT AVAILABILITY

	Essential-Very Most Important	Very Important	Important	Not so Important
	%	%	%	%
A paid companion who can come to the home a few hours each week to give caregivers a rest	68	21	7	3
Assistance in locating people or organizations that provide care for the patient	56	28	13	3
Assistance in applying for Medicaid, OASDI, SSI, etc.	54	23	17	6
A paid companion who can come to the home and provide overnight care so caregivers can go away for one or more days	53	25	15	7
A home health aide--a person paid to provide personal care for a patient, such as bathing, dressing, or feeding in the home	51	29	14	6
Support groups comprised of others who are caring for patients with dementia	50	28	16	6
Nursing home care--special nursing home programs only for patients with dementia	48	25	19	8
Respite care--temporary round-the-clock care in a nursing home or hospital to care for the patient while the caregiver is away or takes some rest	47	27	18	8
A visiting nurse--a registered nurse paid to provide nursing care to the patient at home	41	25	21	13
Adult day care--a group program which provides out-of-the-home activity and supervision during the day	41	25	21	13
Domiciliary or boarding care--a living arrangement that provides residential care but not nursing care either in another family's home or in a group home	25	18	27	30

Question: "Regardless of cost and current availability, how important do you think it is that each of the services described below be made available in your area to help care for patients with dementia?"

TABLE 4-2

AVAILABILITY AND USE OF SERVICES FOR PATIENTS WITH DEMENTIA

	Available			Used (Base = Available)		
Service	Yes	No	Don't Know	Yes, Currently Used	No, Never Used	No, But Used in Past
100% ⟶	%	%	%	%	%	%
Paid companion/home health aide	52	17	31	21	39	40
Visiting nurse	55	11	34	15	54	31
Respite care	23	26	51	13	65	22
Adult day care	31	26	43	12	68	20
Domiciliary/boarding care	16	29	55	25	66	9
Nursing home care	23	36	41	34	53	13

Note: This table is percentaged horizontally.

Question: "As far as you know, is it possible where you (or the primary caregiver) live to obtain the services of:"

Question: "Are you (or the primary caregiver) currently using such service?"

TABLE 4-3

REASONS FOR NOT USING PAID COMPANION/HOME HEALTH AIDE/VISITING NURSE/RESPITE CARE/ADULT DAY CARE/DOMICILIARY OR BOARDING CARE/NURSING HOME CARE

	Paid Com-panion/ Health Aide	Visit-ing Nurse	Respite Care	Adult Day Care	Domicil-iary/ Boarding Care	Nursing Home Care
(Base)[1/]	(41%)	(47%)	(20%)	(27%)	(12%)	(15%)
	%*	%*	%*	%*	%*	%*
Reasons						
The patient entered a nursing home	48	47	44	38	46	27
The service is too expensive	33	26	26	12	18	22
The patient got worse or died	22	23	17	18	12	22
The service is not needed	21	30	27	21	32	31
The people available to provide this service are not sufficiently knowledgeable about dementia	18	12	6	6	10	5
The patient refused to accept the service	16	11	11	27	14	6
Lack of knowledge about how to arrange for this service	9	2	7	5	6	10
The waiting list is too long	4	1	3	2	2	8
The service would not accept the patient because of the patient's diagnosis	1	4	5	6	6	6
Other reasons	12	7	15	12	12	15

* Multiple responses.

[1/] Question asked respondents who said respective service was available but was not used.

5. Sources of Financial Support in Caring for Alzheimer's Patients

Chapter 5

Sources of Financial Support in Caring for Alzheimer's Patients

This last chapter focuses upon the financial issues involved in caring for patients with Alzheimer's disease. It reports information about the main sources of income used to support patients, reliance on the patients' (and their spouses') own savings and the financial impact of caring for patients on the family.

Two sources of income are found to provide the largest share of the patients' support: their own savings and their own Social Security payments. Also important are the patients' retirement income and Medicare.

One in four patients has reportedly used all or most of their savings. It is expected that the majority of the patients will eventually drain their savings--leaving, in many instances, the well spouse with little income left.

The financial impact of paying for patients' care varies among caregivers. The majority report that there has been no impact thus far or that the extra expenses have been picked up fairly easily. Eight percent, however, report not being able to make ends meet, while 22% have cut back sharply.

Main Sources of Income

To determine the main sources of income used to support patients with dementia, caregivers were presented with a list of eleven possible income sources and asked:

A. To indicate which of these sources were used to support the patient, and

B. To estimate the approximate percent that each source used contributed to the patient's overall support.

From the responses to these two questions, it is clear that two sources of income are most critical in supporting dementia patients: the patients' own savings and their Social Security payments.

Frequency as Income Source

These two income sources, first of all, are most frequently named as providing financial support for dementia patients.

... Ninety-four percent of patients reportedly receive support from their Social Security payments.

... Eighty percent receive support from their own savings or income from assets.

Also frequently used as a source of support is Medicare (by 60%), income from the patient's spouse (59%) and other retirement or pension income of the patient (58%).

... Thirty-four percent of patients reportedly receive financial help from their children and 10% from other relatives.

... With regard to other government programs, 36% receive financial assistance from Medicaid, 15% from Supplemental Security Income (SSI), 13% from the Veterans Administration and 11% from OASDI or another disability payment.

(See Table 5-1)

Mean Support Provided

Another indication of these patients' reliance upon these income sources is the mean contribution of each source for those using that source.

... The largest mean contribution, 67%, is provided by the Veterans Administration. Only 13% of the patients, however, receive support from the Veterans Administration.

... Patients' own savings provide a mean support of 46%.

... Patients' Social Security payments provide a mean of 38%.

... Supplemental Security Income provides 37% (but is relied on by only 15% of respondents).

... Other retirement income provides a mean of 34%.

(See Table 5-2)

Total Support Provided

The overall support provided by these eleven income sources can be determined by multiplying these two figures together: the percent using each times the mean contribution of each. The results should be regarded as rough and approximate[1]--but are clearly indicative of the primacy of the patient's own savings and Social Security payments as income sources.

... Patients' own savings provide a total contribution of 37%.

... Patients' Social Security payments provide a total contribution of 36%.

---

[1] One reason that these estimates should be taken as approximate is that they add up to 145%, not 100%. Many respondents made their estimates without making sure that they totaled 100%.

... Next most important are other retirement income (20%), Medicare (11%), the Veterans Administration (9%), and the patients' children (8%).

... To be noted is the small role of Medicaid as a financial resource. According to these reports, 36% of patients get some support from Medicaid but Medicaid payments provide, on average, only 9% of their support. The combined contribution of Medicaid is thus only 3% of the patients' support.

(See Table 5-2)

Use of Patients' Savings

As a further gauge on the use of the patients' savings as a source of support, caregivers were asked:

... How much of the patient's savings had been spent on the patient's care since he/she became ill.

... How much of the patient's savings were expected to eventually go for his/her care.

... How much income has been left for the well spouse as a result of paying for the patient's care.

The results show wide variations in the proportion of the patients' savings that have been spent thus far--but an expectation, among most caregivers, that all or most of the patient's savings will eventually be spent.

At present:

... Twenty-six percent of patients have reportedly had all or most of their savings spent while 17% have had a large amount (at least half).

... Thirty-one percent have had some but less than half, 16%, none at all.

... Ten percent reportedly had no savings.

(See Table 5-3)

Future expectations:

... Sixty-four percent of patients are expected to have all or most of their savings spent.

... Eighteen percent are expected to have at least half of their savings go for their care.

... Nine percent are expected to have less than half, and the remaining 9% none at all.

(See Table 5-4)

The result is the expectation--in many instances--that there will be little money left over for the well spouse.

... Twenty-five percent expect there will be some but very little.

... Thirty-two percent expect about half the income will be left.

... Thirty-one percent anticipate that all or most will be left.

(See Table 5-5)

Financial Impact on Caregivers' Family

Caregivers, finally, were asked about the impact--thus far--on them and other members of their family of paying for the patient's care.

... Eight percent of caregivers report having to cut back sharply on expenses but still not being able to make ends meet.

... Twenty-percent report cutting back sharply but being able to make ends meet.

... Ten percent report doing without some things but being able to get by.

... The remainder report little or no financial impact.

(See Table 5-6)

TABLE 5-1

SOURCES OF INCOME USED TO SUPPORT PATIENT WITH DEMENTIA

Which of These Possible Sources of Income Used to Support Patient?	Source	Not a Source
100% →	%	%
Patient's own savings, income from assets	80	20
Patient's Social Security	94	6
Other retirement/pension income of patient	58	42
OASDI or other disability payment	11	89
SSI (Supplemental Security Income)	15	85
Medicaid	36	64
Medicare	60	40
The Veterans Administration	13	87
The patient's spouse	59	41
The patient's children	34	66
Contributions from other relatives	10	90
Other	13	87

Note: This table is percentaged horizontally.

TABLE 5-2

MEAN CONTRIBUTION OF INCOME SOURCES IN SURRPORTING DEMENTIA PATIENT

Source	Mean Contribution x	(Base) =	Total Contribution
	%	%	%
Patient's own savings, income from assets	46	(80)	37
Patient's Social Security	38	(94)	36
Other retirement/pension income of patient	34	(58)	20
OASDI or other disability payment	23	(11)	3
SSI (Supplemental Security Income)	37	(15)	6
Medicaid	9	(36)	3
Medicare	19	(60)	11
The Veterans Administration	67	(13)	9
The patient's spouse	11	(59)	6
The patient's children	24	(34)	8
Contributions from other relatives	13	(10)	1
Other	37	(13)	5

TABLE 5-3

AMOUNT OF PATIENT'S SAVINGS SPENT ON HIS/HER CARE SINCE BECOMING ILL

	Total Respondents
	%
How Much of Patient's Savings Spent	
All or most	26
A large amount (at least half)	17
Some but less than half	31
None	16
Patient had no savings	10

Question: "How much of the patient's savings has been spent on the patient's care since he/she became ill?"

TABLE 5-4

PROPORTION OF PATIENT'S INCOME/ SAVINGS EXPECTED TO EVENTUALLY GO FOR HIS/HER CARE

	Total Respondents
	%
How Much Expect to Go for Care	
All or most	64
At least half	18
Less than half	9
None	9

Question: "How much of the patient's savings/income do you expect will eventually go for his/her care?"

TABLE 5-5

PROPORTION OF INCOME/SAVINGS LEFT FOR PATIENT'S SPOUSE AFTER PAYING FOR CARE

Proportion of Income/ Savings Left	Total Respondents %
All or most	31
About half	32
Some but very little	25
Patient has no living spouse	12

Question: "How much income has been left for the well spouse as a result of paying for the patient's care?"

TABLE 5-6

FINANCIAL IMPACT ON FAMILY OF PAYING FOR PATIENT'S CARE

Which Statement Best Describes the Financial Impact on Your Family?	Total Respondents %*
We have had to cut back sharply on expenses and still can't make ends meet	8
We have had to cut back sharply on expenses but have been able to make ends meet	22
We have had to do without some things but are getting by	10
We have been able to pick up the extra expenses fairly easily	21
So far there has been no impact; we have not had to contribute to the patient's support	48

* Mutliple responses.

Question: "Which of the following statements best describes the financial impact--on you and other members of your family--of paying for the patient's care?"

APPENDIX

YSW
Yankelovich, Skelly and White, Inc.

108

November, 1985

Dear Participant:

As you know, caring for a person with Alzheimer's disease or another dementing illness can involve a major personal sacrifice--a commitment of time, energy, and financial resources.

Congress has asked the Office of Technology Assessment to collect information about what it is like to care for someone who has a dementing illness--in order to determine what can or should be done to help such persons. We have been asked by the Office of Technology Assessment to carry out such an investigation.

Yankelovich, Skelly and White is proud to be conducting a study of such importance. We are also fortunate to be working with one of the foremost experts in the care of patients with dementia--Nancy Mace, the co-author of The 36 Hour Day.

By filling out this questionnaire, you will be contributing to the success of this effort. I thank you ahead of time for doing so.

Sincerely,

Arthur H White

Arthur H. White
Vice Chairman
Yankelovich, Skelly and White, Inc.

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INSTRUCTIONS

Please answer all questions on both sides of the page. You may do so by placing an "X" in the appropriate box. Follow the arrows and other instructions to determine which specific questions should be answered and when you should go to the next question or page.

If the patient is deceased, please indicate so in the appropriate question (Q.6) and answer these questions as the situation existed just prior to the patient's passing away.

Your name is not on this questionnaire; all your answers will be anonymous. Please ignore the numbers next to each question; they are used for data processing.

Feel free to write in any additional comments that you believe will be helpful. Space is provided for this purpose on the last page of this questionnaire.

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5/1

General Questions

1. To begin with, here are some statements about health care and about caring for an individual with Alzheimer's disease or another dementing illness. Please tell us whether you strongly agree, agree, disagree, or strongly disagree with each.

	Strongly Agree	Agree	Disagree	Strongly Disagree
	1	2	3	4
The best place for an individual with Alzheimer's disease is to live at home with friends and relatives.................. 6	☐	☐	☐	☐
Health care is something people ought to take care of themselves and not rely on government to provide for them............ 7	☐	☐	☐	☐
In the case of an illness such as Alzheimer's, it is best for people to rely on the advice and assistance of health care professionals................. 8	☐	☐	☐	☐
Ways should be found for an individual with Alzheimer's disease to live at home with friends and relatives............. 9	☐	☐	☐	☐
Government agencies do not provide the financial support they should be providing in the care of patients with Alzheimer's................................10	☐	☐	☐	☐
When all is said and done, a patient with a severe case of Alzheimer's disease should be living in a nursing home....................................11	☐	☐	☐	☐
Nursing homes provide high quality care for individuals who live in them....................................12	☐	☐	☐	☐

2. What is your relationship to the individual who has Alzheimer's disease or another dementing illness? (CHECK ONE)

Spouse..............13 ☐ 1
Daughter............ ☐ 2
Son................. ☐ 3
Daughter-in-law...... ☐ 4
Son-in-law............ ☐ 5
Other relative......... ☐ 6
Friend................ ☐ 7
Other ______________.. ☐ 3
Please indicate

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3. What is your role in helping care for this individual? (CHECK ONE)

I am the primary caregiver -- the person (other than a doctor or paid professional) who most directly or most frequently cares for the patient with dementia (or have done so in the past if the person is deceased or in a nursing home)...............(GO TO Q.6) 14 ☐ 1

I am involved in caring for the patient with dementia but am not the primary caregiver........................ ☐ 2

I help care for the patient with dementia but in a minor way.. ☐ 3

The patient lives in a nursing or boarding home, but I have primary responsibility for decision-making about the patient's affairs............ (GO TO Q.6) ☐ 4

None of these but ________________________

____................. ☐ 5
(PLEASE WRITE IN)

IF YOU ARE NOT THE PRIMARY CAREGIVER:

4. What is the relationship of the primary caregiver to the patient with dementia?

Spouse................... 15 ☐ 1
Daughter.................. ☐ 2
Son...................... ☐ 3
Daughter-in-law........... ☐ 4
Son-in-law................. ☐ 5
Other relative............. ☐ 6
Friend.................... ☐ 7
Other ..... ☐ 8
(Please indicate)

5. What is your relationship to the primary caregiver of the patient?

Spouse.................... 16 ☐ 1
Brother/Brother-in-law..... ☐ 2
Sister/Sister-in-law....... ☐ 3
Son or daughter........... ☐ 4
Other relative............ ☐ 5
Other .... ☐ 6
(PLEASE INDICATE)

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6. Where does the patient live? (CHECK ONE)

Alone..................17 ☐ 1
With you............... ☐ 2
With the primary caregiver.............. ☐ 3
(if other than you)
With someone else....... ☐ 4
(who is not the primary caregiver)
In a foster, personal care, or boarding home... ☐ 5
In a nursing home......... ☐ 6
In a state hospital....... ☐ 7
In a Veterans Administration home or hospital.................... ☐ 8
Patient is deceased....... ☐ 9

7. Altogether, in how many homes of relatives has the patient lived since becoming ill with dementia?

None..............18 ☐ 1
One............... ☐ 2
Two............... ☐ 3
Three or more..... ☐ 4

ANSWER QUESTIONS 8 TO 16 ONLY IF THE PATIENT IS PRESENTLY LIVING IN A HOUSEHOLD WITH ONE OR MORE OTHER PERSONS. OTHERWISE, GO TO PAGE 5.

8. How many other people live in the same household with the patient?

One...............19 ☐ 1
Two............... ☐ 2
Three............. ☐ 3
Four or five...... ☐ 4
Six or seven...... ☐ 5
Eight or more..... ☐ 6

a. How many of these are children under the age of 18?

None..............20 ☐ 1
One............... ☐ 2
Two................ ☐ 3
Three or more...... ☐ 4

9. What is the total family income--before taxes--of the family with which the patient lives?

Under $10,000.......21 ☐ 1
$10-19,999.......... ☐ 2
$20,000-29,999...... ☐ 3
$30,000-49,999........ ☐ 4
$50,000 or more....... ☐ 5
Don't know............ ☐ 6

10. How many adults (18 and over) are there in the household who are working either part-time or full-time?

None..............22 ☐ 1
One............... ☐ 2
Two................ ☐ 3
Three or more...... ☐ 4

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11. Did anyone in the household stop working in order to help care for the patient?

Yes...........23 ☐ 1 No.................. ☐ 2

IF YES: GO TO Q.14

12. Was this person the primary caregiver or someone else?

Primary caregiver.......24 ☐ 1
Someone else............ ☐ 2
(SPECIFY:________________)

13. Approximately how much salary was lost as a result of this person's stopping working to care for the patient? (CHECK ONE)

Less than $2,500.......25 ☐ 1	$10,000-$14,999......... ☐ 5
$2,500-4,999............ ☐ 2	$15,000-$19,999......... ☐ 6
$5,000-7,249............ ☐ 3	$20,000-$29,999......... ☐ 7
$7,500-9,999............ ☐ 4	$30,000 or more......... ☐ 8

14. Did anyone in the household get physically sick or injured as a result of caring for the patient with dementia? (CHECK ALL THAT APPLY)

Yes, the primary caregiver.......26 ☐ 1
Yes, someone else................ ☐ 2
No............................... ☐ 3

15. Did anyone in the household become very stressed as a result of caring for the patient with dementia? (CHECK ALL THAT APPLY)

Yes, the primary caregiver.......27 ☐ 1
Yes, someone else................ ☐ 2
No............................... ☐ 3

16. As a result of this stress, did anyone seek help from a counselor or psychiatrist?

Yes, the primary caregiver.......28 ☐ 1
Yes, someone else................ ☐ 2
No............................... ☐ 3

QUESTIONS ABOUT THE PATIENT

17. What is the patient's diagnosis? (CHECK ONE)

Alzheimer's disease (also called SDAT or DAT), senility, organic brain syndrome........................29 ☐ 1

Multi-infarct dementia, stroke, cerebral arteriosclerosis, hardening of the arteries................. ☐ 2

Other (a dementia illness)................................ ☐ 3

Other (the patient does not have a dementia illness).......... ☐ 4

Don't know.. ☐ 5

18. How many years ago was this diagnosis made?

Less than one..........30 ☐ 1

One..................... ☐ 2

Two or Three............ ☐ 3

Four or Five............ ☐ 4

Six or Seven............ ☐ 5

Eight or Nine........... ☐ 6

Ten - Fourteen.......... ☐ 7

Fifteen or more......... ☐ 8

19. For how many years prior to this diagnosis--if any--do you think the patient had a dementia or memory disorder?

None.............31 ☐ 1

Less than one...... ☐ 2

One................ ☐ 3

Two................ ☐ 4

Three.............. ☐ 5

Four................... ☐ 6

Five................... ☐ 7

Six.................... ☐ 8

Seven or more.......... ☐ 9

20. Other than the patient's dementing illness, how would you describe the patient's general health? (CHECK ONE)

Excellent........32 ☐ 1

Good............. ☐ 2

Fair............. ☐ 3

Poor.................. ☐ 4

Very poor............. ☐ 5

Don't know............ ☐ 6

21. How well is the patient able to do each of the following?

	Very well	Somewhat	Not at all
	1	2	3
Perform simple household tasks, such as setting the table or simple home repairs.....................33	☐	☐	☐
Cope with small sums of money...............34	☐	☐	☐
Dress without assistance....................35	☐	☐	☐
Eat without assistance......................36	☐	☐	☐
Walk without assistance.....................37	☐	☐	☐

22. What are the patient's toilet skills like? (CHECK ONE)

Independent/fully functional.........................38 ☐ 1
Has occasional accidents/needs some help or reminder... ☐ 2
Has frequent wet beds or accidents.................... ☐ 3
Is doubly incontinent (has bowel and urine accidents).. ☐ 4

23. What are the patient's eating skills like? (CHECK ONE)

Eats cleanly, with proper utensils...........39 ☐ 1
Eats messily.................................. ☐ 2
Only eats simple solids, like crackers by self..................................... ☐ 3
Has to be fed by others....................... ☐ 4
Is tube fed................................... ☐ 5

24. What are the patient's sleep habits like? (CHECK ONE)

Remains in bed most nights..................40 ☐ 1
Is out of bed occasionally.................. ☐ 2
Is out of bed most nights................... ☐ 3
Cannot get out of bed without assistance...... ☐ 4

25. How frequently does the patient:

	Very Frequently 1	Occasionally 2	Rarely/ Never 3	Don't Know 4
Get in a depressed mood................41	☐	☐	☐	☐
Become listless and apathetic..........42	☐	☐	☐	☐
Have periods of restlessness and agitation........................43	☐	☐	☐	☐
Engage in crying episodes..............44	☐	☐	☐	☐
Have inappropriate angry outbursts.....45	☐	☐	☐	☐
Engage in actions (hit, pinch, throw things) that physically hurt people..........................46	☐	☐	☐	☐
Would wander away from home unless watched.......................47	☐	☐	☐	☐

26. Has the patient gained or lost ten pounds or more in the past year?

Yes, gained ten pounds or more.....48 ☐ 1
Yes, lost ten pounds or more....... ☐ 2
No................ ☐ 3
Don't know....... ☐ 4

27. What is the patient's:

Sex:

Male.............49 ☐ 1
Female........... ☐ 2

Race:

White............50 ☐ 1
Black............ ☐ 2
Other............ ☐ 3

Marital Status:

Married.................51 ☐ 1
Widowed.................. ☐ 2
Divorced/separated....... ☐ 3
Single-never married..... ☐ 4

28. What was the patient's approximate total family income the last time the patient or the patient's spouse was working?

Under $10,000.........52 ☐ 1
$10,000-19,999........ ☐ 2
$20,000-29,999........ ☐ 3
$30,000-49,999........ ☐ 4
$50,000 or more..... . ☐ 5
Don't know........... ☐ 6

29. In what kind of community does the patient currently live?

A large city...............53 ☐ 1
A medium-sized city........ ☐ 2
A suburb................... ☐ 3
A small town or rural area. ☐ 4

30. In which state does the patient currently live?

______________________________ 54
(WRITE IN) 55

QUESTIONS ABOUT THE PATIENT'S CARE

31. Here are some statements about the care of patients with Alzheimer's disease or another dementing illness. Please indicate whether you strongly agree, agree, disagree, or strongly disagree with each.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Sure/Not Applicable
	1	2	3	4	5
The assistance I've received from health care professionals--in caring for an individual with Alzheimer's disease--has been excellent.........................56	☐	☐	☐	☐	☐
In my experience, most health care professionals know little about managing patients who have Alzheimer's disease...........57	☐	☐	☐	☐	☐
From what I have seen, a patient who is ill with dementia receives worse care from health professionals than patients who are ill with something else............58	☐	☐	☐	☐	☐
I have found it difficult to find satisfactory paid professionals to assist in caring for an Alzheimer's patient at home.........59	☐	☐	☐	☐	☐
I really don't know where to go to get help in caring for an Alzheimer's patient at home......60	☐	☐	☐	☐	☐
In my view, the existing nursing homes where Alzheimer's patients might live are inadequate in the care they provide...........61	☐	☐	☐	☐	☐

32. How much trouble have you had finding a doctor who could adequately care for the patient with dementia? (CHECK ONE)

A great deal of trouble....62 ☐ 1
A moderate amount........... ☐ 2
Only a little............... ☐ 3
None at all................. ☐ 4

33. How satisfied are you with the care the patient currently receives from doctor(s)?

Very satisfied...........63 ☐ 1
Moderately satisfied........ ☐ 2
Only somewhat satisfied..... ☐ 3
Not satisfied at all........ ☐ 4

34. In total, how many doctors has the patient seen to diagnose or treat his/her dementia problems? (DO NOT INCLUDE DOCTORS WHO MIGHT HAVE BEEN SEEN ONLY FOR RESEARCH PROJECTS.)

One.............64 ☐ 1
Two............... ☐ 2
Three.............. ☐ 3
Four or Five....... ☐ 4
Six or more........ ☐ 5
Don't know......... ☐ 6

35. How often does the patient see a doctor who regularly treats patients with dementia? (CHECK ONE)

At least once a month..........65 ☐ 1
Several times a year........... ☐ 2
Only occasionally.............. ☐ 3
Never.......................... ☐ 4

36. How many miles one-way does the patient travel to see this doctor?

_______________ 66
(WRITE IN) 67

37. How often does the patient see a family doctor for care?

At least once a month.........68 ☐ 1
Several times a year........... ☐ 2
Only occasionally.............. ☐ 3
Never.......................... ☐ 4 → GO TO NEXT PAGE

38. Overall, how would you rate this doctor's knowledge about how to manage or care for patients with dementia?

Very knowledgeable...........69 ☐ 1
Somewhat knowlegeable .... ☐ 2
Not knowledgeable at all...... ☐ 3
Don't know.................... ☐ 4

39. Has this doctor asked about the health of the person who provides the most care to the patient with dementia? (CHECK ONE)

Yes, often.............70 ☐ 1
Yes, on occasion........ ☐ 2
No...................... ☐ 3
Don't know.............. ☐ 4

40. Has the patient ever been hospitalized--at least overnight--since becoming ill with dementia?

Yes..............71 ☐ 1 No............... ☐ 2

GO TO Q.44

IF YES:

41. How, in general, would you describe the way that hospital personnel handled the patient's dementia problems? (CHECK ONE)

Excellent..........72 ☐ 1
Good................. ☐ 2
Fair................. ☐ 3
Poor............. ☐ 4
Very poor........ ☐ 5
Don't know....... ☐ 6

42. Was the patient ever moved from one hospital to another because of poor handling of his/her dementia problems?

Yes, once..........................73 ☐ 1
Yes, twice......................... ☐ 2
Yes, three times or more............ ☐ 3
No................................. ☐ 4

43. In your view, was the patient ever discharged from the hospital when he/she should have remained there longer for treatment?

Yes..............74 ☐ 1
No............... ☐ 2
Don't know........ ☐ 3

QUESTIONS ABOUT NURSING HOME CARE

44. Have you or anyone else ever applied to have the patient admitted to a nursing home?

Yes..............75 ☐ 1 No............... ☐ 2

GO ON GO TO Page 12

45. When you applied, were you or other members of the patient's family told any of the following? (PLEASE CHECK FOR EACH)

	Yes	No	Don't Know
	1	2	3
That they must make a donation to the nursing home for the patient to stay there.................76	☐	☐	☐
That they would have to sign an agreement requiring the family to pay for the patient for a specified length of time....................77	☐	☐	☐
That the patient's spouse would have to pay for the patient's support.....................78	☐	☐	☐

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46. Was the patient in fact admitted to a nursing home? (CHECK ONE) 5/2

Yes--and is currently living in a nursing home......6 ☐ 1
Yes--has lived in an nursing home in the past....... ☐ 2
Yes--but did not enter the nursing home............. ☐ 3
No.. ☐ 4

GO TO NEXT PAGE

47. In how many nursing homes has the patient lived?

One...............7 ☐ 1
Two............... ☐ 2
Three or more..... ☐ 3

48. In general, how would you describe the care the patient received in the nursing home(s)? (CHECK ONE)

Excellent.........8 ☐ 1
Good.............. ☐ 2
Average........... ☐ 3
Poor.................. ☐ 4
Very poor............. ☐ 5
Don't know............ ☐ 6

49. Did or does the patient live in a special unit only for persons with dementia or a mixed unit with residents--not all of whom are demented--with various problems?

Special unit for demented persons.........9 ☐ 1
Mixed unit................................ ☐ 2
Both...................................... ☐ 3
Don't know................................ ☐ 4

50. Was the patient ever asked to leave a nursing home?

Yes...........10 ☐ 1
No............. ☐ 2

GO TO NEXT PAGE

51. What reason(s) were given for the patient being told to leave? (CHECK ALL THAT APPLY)

The patient was hard to manage because of his/her behavior....................................11 ☐ 1

The patient ran out of private funds and the nursing home would not keep the patient on Medicaid funds alone....................... ☐ 2

Some other reason (PLEASE INDICATE):________________....... ☐ 3

QUESTIONS ABOUT VETERANS HOSPITAL CARE

52. Is the individual with Alzheimer's disease a veteran?

Yes................12 ☐ 1

GO ON

No.................... ☐ 2

GO TO NEXT PAGE

53. Has the patient ever applied to a Veterans Hospital to receive extended care for his dementing illness?

Yes................13 ☐ 1

No.................... ☐ 2

GO TO NEXT PAGE

54. Was the patient accepted for extended care?

Yes................14 ☐ 1

GO TO Q.56

No.................... ☐ 2 ↓

55. What reasons were given for the patient not being accepted? (CHECK ALL THAT APPLY)

He did not have a service-connected disability.....15 ☐ 1
He was under 65 years of age...................... ☐ 2
Other (SPECIFY): ______________________..... ☐ 3

56. In general, how would you describe the care the patient received in the Veterans Hospital? (CHECK ONE)

Excellent........16 ☐ 1	Poor.................... ☐ 4
Good............. ☐ 2	Very poor.............. ☐ 5
Average.......... ☐ 3	Don't know............. ☐ 6

57. Was the patient ever taken out of a Veterans Hospital by you or someone else because of poor care?

Yes..........17 ☐ 1
No............. ☐ 2

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QUESTIONS ABOUT GETTING HELP TO CARE FOR THE PATIENT

58. Did you or anyone else get help, in any setting, from a lawyer or other professional because you felt the patient was inadequately care for, maltreated, or abused?

Yes............18 ☐ 1 No.............. ☐ 2

59. Did you, the patient, or anyone else apply for a disability pension from the patient's employer?

Yes............19 ☐ 1 No.............. ☐ 2

IF YES: 60. Did you receive it?

Yes............20 ☐ No.............. ☐

61. Did you, the patient, or anyone else apply for financial assistance from the federal government's Old Age and Survivor's Disability Insurance program (OASDI)?

Yes............21 ☐ 1 No............... ☐ 2

GO TO Q.64

IF YES: 62. Did the patient receive the financial assistance?

Yes............22 ☐ 1 No............. ☐ 2

IF NO: 63. Was the decision appealed?

Yes........23 ☐ No......... ☐ 2

64. Have you or anyone else ever sought the advice of a lawyer to obtain power of attorney, guardianship, conservatorship, trusteeship, etc., for the person with dementia?

Yes............24 ☐ 1 No............... ☐ 2

IF YES:

65. How knowledgeable was this person about dementia?

Very knowledgeable...........25 ☐ 1
Somewhat knowledgeable........ ☐ 2
Not knowledgeable at all...... ☐ 3

66. Have you or anyone else ever consulted a financial advisor, lawyer, or other professional in order to make financial plans for the person with dementia?

Yes............26 ☐ No............. ☐ 2

IF YES:

67. How knowledgeable was this person/these people about dementia?

Very knowledgeable............27 ☐ 1
Somewhat knowledgeable........ ☐ 2
Not knowledgeable at all...... ☐ 3

68. Did you or anyone else apply for Medical Assistance from the government--either Medicaid or MediCal--to pay for the patient's care in a nursing home?

Yes............28 ☐ 1 No............. ☐ 2

GO ON

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69. Did you (or someone else) encounter any problems in the process of making the application for assistance?

Yes............29 ☐ 1 No............. ☐ 2

IF YES:

70. What kinds of problems did you encounter? (CHECK ALL THAT APPLY)

Did not understand the eligibility rules...30 ☐ 1

Could not get a clear explanation of the eligibility rules................. ☐ 2

Was treated rudely........................ ☐ 3

Other kinds of problems................... ☐ 4
(PLEASE SPECIFY:_______________________)

71. When you applied for Medical Assistance, did the medical office tell you that the patient's spouse was responsible for the patient's financial Support?

Yes.........31 ☐ 1 No.......... ☐ 2 Patient has no spouse...... ☐ 3

IF YES:

72. Did the spouse in fact pay for the patient's care?

Yes................32 ☐ 1
No................. ☐ 2
Don't know......... ☐ 3

73. When you applied for Medical Assistance, were you told that it would be necessary to pay for the patient's care out of private funds?

Yes............33☐1 No............ ☐2 Don't Know........... ☐3

74. As a result of this application, was government Medical Assistance provided to pay for the patient's care in a nursing home?

Yes..........34☐1

IF YES:

75. Did you have any trouble finding a nursing home that would accept a patient on Medicaid?

Yes..........35☐1
No........... ☐2
Don't know... ☐3

76. Were you told that you would have to move the patient to another nursing home if Medicaid began paying for care?

Yes..........36☐1
No........... ☐2
Don't know... ☐3

No............ ☐2

IF NO:

77. What reason(s) were given for the denial? (CHECK ALL THAT APPLY)

The patient was not medically eligible.......................37☐1
The patient's income was too high........................... ☐2
The patient's assets (savings, stocks, etc.) were too high.... ☐3
The spouse's income or assets were too high................. ☐4
The patient had previously transferred assets to someone else.................. ☐5
No reason was given for the denial......................... ☐6
Some other reason.............. ☐7
(SPECIFY: ____________________)
Don't know..................... ☐8

QUESTIONS ABOUT THE AVAILABILITY OF SERVICES TO HELP THE PATIENT

77. Regardless of cost and current availability, how important do you think it is that each of the services described below be made available in your area to help care for patients with dementia? (PLEASE CHECK FOR EACH EVEN IF YOU ARE NOT USING THE SERVICE OR IT IS NOT AVAILABLE IN YOUR AREA)

		Essential-Very Most Important 1	Very Important 2	Important 3	Not so Important 4
A **paid companion** who can come to the home a few hours each week to give caregivers a rest	38	☐	☐	☐	☐
A paid companion who can come to the home and provide **overnight care** so caregivers can go away for one or more days	39	☐	☐	☐	☐
A **home health aide**--a person paid to provide personal care for a patient, such as bathing, dressing, or feeding in the home	40	☐	☐	☐	☐
A **visiting nurse**--a registered nurse paid to provide nursing care to the patient at home	41	☐	☐	☐	☐
		1	2	3	4
Respite care--temporary round-the-clock care in a nursing home or hospital to care for the patient while the caregiver is away or takes some rest	42	☐	☐	☐	☐
Adult day care--a group program which provides out-of-the-home activity and supervision during the day	43	☐	☐	☐	☐
Domiciliary or boarding care--a living arrangement that provides residential care but not nursing care either in another family's home or in a group home	44	☐	☐	☐	☐
Nursing home care--special nursing home programs only for patients with dementia	45	☐	☐	☐	☐
Assistance in applying for Medicaid, OASDI, SSI, etc.	46	☐	☐	☐	☐
Assistance in locating people or organizations that provide care for the patient	47	☐	☐	☐	☐
Support groups comprised of others who are caring for patients with dementia	48	☐	☐	☐	☐

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78. As far as you know, is it possible where you (or the primary caregiver) live to obtain the services of a paid companion (someone who can come to the home a few hours each week to give the caregiver a rest) or a home health aide (someone who can come to the home for a few hours each week to give the caregiver a rest).

Yes..........49 ☐ 1   No................ ☐ 2   Don't know............. ☐ 3

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IF YES: 79. Are you (or the primary caregiver) currently using a paid companion or a home health aide? (CHECK ONE)

No, have never used................50 ☐ 1   No, but have used in the past........... ☐ 2   Yes...... ☐ 3

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IF NOT USING A PAID COMPANION OR HOME HEALTH AIDE:

80. Which of these reasons, if any, resulted in this service not being used? (CHECK ALL THAT APPLY)

The service is not needed...51 ☐ 1

The service is too expensive.................. ☐ 2

Lack of knowledge about how to arrange for this service.................... ☐ 3

The patient refused to accept the service....... ☐ 4

The people available to provide this service are not sufficiently knowledgeable about dementia................... ☐ 5

The waiting list is too long.... ☐ 6

The service would not accept the patient because of the patient's diagnosis............ ☐ 7

The patient entered a nursing home.................. ☐ 8

The patient got worse or died....................... ☐ 9

Other (SPECIFY):______________ ☐ 0

____

81. As far as you know, is it possible where you (or the primary caregiver) live to obtain the services of a visiting nurse -- a Registered Nurse paid to provide nursing care to the patient at home?

Yes..........52 ☐ 1 No............... ☐ 2 Don't know............ ☐ 3

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IF YES: 82. Are you (or the primary caregiver) currently using a visiting Nurse? (CHECK ONE)

No, have never used..............53 ☐ 1 No, but have used in the past.......... ☐ 2 Yes...... ☐ 3

83. Is this being paid for by Medicaid or Medicare?

Medicaid.....54 ☐ 1
Medicare..... ☐ 2
Neither...... ☐ 3

GO TO NEXT PAGE

IF NOT USING A PAID COMPANION OR HOME HEALTH AIDE:

84. Which of these reasons, if any, resulted in this service not being used? (CHECK ALL THAT APPLY)

The service is not needed...55 ☐ 1
The service is too expensive.................. ☐ 2
Lack of knowledge about how to arrange for this service.................... ☐ 3
The patient refused to accept the service....... ☐ 4
The people available to provide this service are not sufficiently knowledgeable about dementia................... ☐ 5
The waiting list is too long.... ☐ 6
The service would not accept the patient because of the patient's diagnosis........... ☐ 7
The patient entered a nursing home.................. ☐ 8
The patient died or got worse......................... ☐ 9
Other (SPECIFY):______________ ☐ 0
____

85. As far as you know, is it possible where you (or the primary caregiver) live to obtain respite care -- temporary round-the-clock care in a nursing home or hospital to care for the patient while the caregiver is away or takes some rest?

Yes..........56 ☐ 1   No............... ☐ 2   Don't know............ ☐ 3

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IF YES: 86. Are you (or the primary caregiver) currently using respite care? (CHECK ONE)

No, have never used...............57 ☐ 1   No, but have used in the past.......... ☐ 2   Yes...... ☐ 3

GO TO NEXT PAGE

IF NOT USING A PAID COMPANION OR HOME HEALTH AIDE:

87. Which of these reasons, if any, resulted in this service not being used? (CHECK ALL THAT APPLY)

The service is not needed...58 ☐ 1

The service is too expensive.................. ☐ 2

Lack of knowledge about how to arrange for this service.................... ☐ 3

The patient refused to accept the service....... ☐ 4

The people available to provide this service are not sufficiently knowledgeable about dementia.................. ☐ 5

The waiting list is too long.... ☐ 6

The service would not accept the patient because of the patient's diagnosis........... ☐ 7

The patient entered a nursing home.................. ☐ 8

The patient died or got worse......................... ☐ 9

Other (SPECIFY):_______________ ☐ 0

____

88. As far as you know, is it possible where you (or the primary caregiver) live to obtain adult day care -- a group program which provides out-of-home activity and supervision during the day?

Yes..........59 ☐ No............... ☐ 2 Don't know............ ☐ 3

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IF YES: 89. Are you (or the primary caregiver) currently using adult day care? (CHECK ONE)

No, have never used..............60 ☐ 1

No, but have used in the past.......... ☐ 2

Yes...... ☐ 3

83. Is this being paid for by Medicaid or Medicare?

Medicaid.....61 ☐ 1
Medicare..... ☐ 2
Neither...... ☐ 3

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IF NOT USING A PAID COMPANION OR HOME HEALTH AIDE:

90. Which of these reasons, if any, resulted in this service not being used? (CHECK ALL THAT APPLY)

The service is not needed...62 ☐ 1

The service is too expensive................. ☐ 2

Lack of knowledge about how to arrange for this service.................... ☐ 3

The patient refused to accept the service....... ☐ 4

The people available to provide this service are not sufficiently knowledgeable about dementia.................. ☐ 5

The waiting list is too long.... ☐ 6

The service would not accept the patient because of the patient's diagnosis........... ☐ 7

The patient entered a nursing home.................. ☐ 8

The patient died or got worse........................ ☐ 9

Other (SPECIFY):______________ ☐ 0

____

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91. As far as you know, is it possible where you (or the primary caregiver) live to obtain domiciliary or boarding care -- a living arrangement that provides residential care but not nursing care either in another family's home or in a group home?

Yes..........63 ☐ 1   No................ ☐ 2   Don't know............. ☐ 3

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IF YES: 92. Are you (or the primary caregiver) currently using domiciliary or boarding care? (CHECK ONE)

No, have never used...............64 ☐ 1   No, but have used in the past........... ☐ 2   Yes...... ☐ 3

83. Is this being paid for by Medicaid or Medicare?

Medicaid.....65 ☐ 1
Medicare..... ☐ 2
Neither...... ☐ 3

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IF NOT USING A PAID COMPANION OR HOME HEALTH AIDE:

93. Which of these reasons, if any, resulted in this service not being used? (CHECK ALL THAT APPLY)

The service is not needed...66 ☐ 1

The service is too expensive.................. ☐ 2

Lack of knowledge about how to arrange for this service.................... ☐ 3

The patient refused to accept the service....... ☐ 4

The people available to provide this service are not sufficiently knowledgeable about dementia................... ☐ 5

The waiting list is too long.... ☐ 6

The service would not accept the patient because of the patient's diagnosis........... ☐ 7

The patient entered a nursing home.................. ☐ 8

The patient died or got worse......................... ☐ 9

Other (SPECIFY):______________ ☐ 0

____

94. As far as you know, is it possible where you (or the primary caregiver) live to obtain the services of nursing home care -- special nursing home programs only for patients with dementia?

Yes..........67 ☐ 1 No............... ☐ 2 Don't know............ ☐ 3

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IF YES: 95. Are you (or the primary caregiver) currently using special nursing home care--a program only for patients with dementia? (CHECK ONE)

No, have never used................68 ☐ 1 No, but have used in the past......... ☐ 2 Yes...... ☐ 3

96. Is this being paid for by Medicaid or Medicare?

Medicaid.....69 ☐ 1
Medicare...... ☐ 2
Neither....... ☐ 3

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IF NOT USING A PAID COMPANION OR HOME HEALTH AIDE:

97. Which of these reasons, if any, resulted in this service not being used? (CHECK ALL THAT APPLY)

The service is not needed...70	☐ 1	The waiting list is too long....	☐ 6
The service is too expensive..................	☐ 2	The service would not accept the patient because of the patient's diagnosis...........	☐ 7
Lack of knowledge about how to arrange for this service.....................	☐ 3	The patient entered a nursing home..................	☐ 8
The patient refused to accept the service.......	☐ 4	The patient died or got worse.........................	☐ 9
The people available to provide this service are not sufficiently knowledgeable about dementia...................	☐ 5	Other (SPECIFY):______________ ______________________________	☐ 0

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QUESTIONS ABOUT PAYING FOR THE PATIENT'S CARE

98. How much of the patient's savings have been spent on the patient's care since he/she became ill? (CHECK ONE)

All or most....................71 ☐ 1
A large amount (at least half).... ☐ 2
Some but less than half.......... ☐ 3
None............................ ☐ 4
Patient had no savings........... ☐ 5

99. How much income has been left for the well spouse as a result of paying for the patient's care? (CHECK ONE)

All or most....................72 ☐ 1
About half...................... ☐ 2
Some but very little............ ☐ 3
None............................ ☐ 4
Patient has no living spouse...... ☐ 5

100. How much of the patient's savings/income do you expect will eventually go for his/her care?

All or most........73 ☐ 1
At least half...... ☐ 2
Less than half..... ☐ 3
None............... ☐ 4

101. Which of the following statements best describes the financial impact--on you and other members of your family--of paying for the patient's care?

We have had to cut back sharply on expenses and still can't make ends meet..........................74 ☐ 1

We have had to cut back sharply on expenses but have been able to make ends meet.................. ☐ 2

We have had to do without some things but are getting by..................................... ☐ 3

We have been able to pick up the extra expenses fairly easily................................. ☐ 4

So far there has been no impact; we have not had to contribute to the patient's support............. ☐ 5

102. Did you or any members of the patient's family spend some or all of their savings to help care for the patient? (CHECK ONE)

Yes, all or most.........................75 ☐ 1
Yes, a large amount (at least half)........ ☐ 2
Yes, some but less than half............... ☐ 3
No...................................... ☐ 4

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103. Did you or any members of the patient's family borrow money to help care for the patient? (CHECK ONE)

Yes, $20,000 or more in total..........76 ☐ 1
Yes, between $10,000 and $20,000......... ☐ 2
Yes, between $5,000 and $10,000.......... ☐ 3
Yes, less than $5,000.................... ☐ 4
No....................................... ☐ 5

104. The purpose of this last question is to obtain an overall understanding of how people go about paying for the care of patients with dementia. It is very important for the purposes of this study.

Please indicate in Column A whether each of these possible sources of income is used to support the patient. In Column B, please estimate the approximate percent that each of the sources checked contribute to the patient's overall support. The total of these percents should equal 100%.

	Column A		Column B	
	Source of Income	Not a Source of Income	Approximate Percent	5/3
Patient's own savings, income from assets..........	6 ☐ 1	☐ 2	________	18-20
Patient's Social Security.............	7 ☐ 1	☐ 2	________	21-23
Other retirement/pension income of patient..........................	8 ☐ 1	☐ 2	________	24-26
OASDI or other disability payment...........................	9 ☐ 1	☐ 2	________	27-29
SSI (Supplemental Security Income)...........................	10 ☐ 1	☐ 2	________	30-32
Medicaid............................	11 ☐ 1	☐ 2	________	33-35
Medicare............................	12 ☐ 1	☐ 2	________	36-38
The Veterans Administration..........	13 ☐ 1	☐ 2	________	39-41
The patient's spouse................	14 ☐ 1	☐ 2	________	42-44
The patient's children..............	15 ☐ 1	☐ 2	________	45-47
Contributions from other relatives....	16 ☐ 1	☐ 2	________	48-50
Other............................... (SPECIFY)	17 ☐ 1	☐ 2	________	51-53
			TOTAL = 100%	

THANK YOU FOR YOUR TIME AND COOPERATION. If you have any views you would like to express on the issues explored in this questionnaire, we'd appreciate your comments on the next page.